didactic setting. I have a huge administrative responsibility for scheduling and things like that.

[1713]

And in almost all of my clinical activities in all of the settings I have described I frequently have residents with me who are observing and learning, whether it's ultrasound or counseling, or providing prenatal care in labor and delivery and in the operating room.

Q. Do you supervise a fellowship?

A. Yes, I do.

Q. What is that fellowship?

A. That is the maternal fetal medicine fellowship.

Q. How does your time divide between teaching and your other responsibilities?

A. Well, in almost all of my clinical responsibilities, as I have stated, does involve teaching. So there is a very, very, very small portion of my activity that doesn't involve some teaching.

Purely didactic teaching where I have a group of residents and students or fellows in a lecture room and giving a presentation may account for 10 percent of my time. Probably another 10 percent of my time is in the administrative and research. And probably the other 80 percent of my time is devoted to clinical activity. But, again, teaching is a part of most of this activity.

Q. Do you serve on any hospital committees?

A. Yes, I do.

Q. What are those?

[1714]

A. I am a member of the Quality Assurance Committee for the Department of Obstetrics and Gynecology. This committee is charged with reviewing the medical care of patients that may have had complications or whose records have been referred to my committee for review. It could arise from a patient complaint or a complaint from a physician or another health care professional.

And this committee reviews the medical care and makes recommendations to the hospital Quality Assurance Committee and to the chairman of my department.

I am also a member of the Obstetrics Patient Safety Committee for the hospital. And this committee is charged with reviewing protocols and developing and implementing protocols relating to obstetric care to maximize patient safety and to anticipate and avoid complications in our patients.

Q. Are you also a member of any professional associations?

A. I am. I am a fellow of the American College of Obstetrics and Gynecology, or ACOG. And I am a member of the Society for Maternal Fetal Medicine.

Q. Have you authored any publications?

A. Yes, I have.

Q. Approximately how many?

A. I have authored or co-authored approximately 30 articles in literature, all but two or three of which underwent peer review.

[1715]

Q. In what subjects were those articles?

A. They really comprise the whole breadth of obstetrics. Some of them relate to medical or obstetric complications in pregnancy, multi-fetal pregnancy: twins and triplets, prenatal diagnosis of—based on abnormal ultrasound, prenatal diagnosis of downs syndrome, genetic—other genetic abnormalities in pregnancy, as well as abortion.

Q. Do you sometimes perform peer review for journals?

A. I do.

Q. For which journals?

A. I am a peer reviewer for the American Journal of Obstetrics and Gynecology, which we call the Gray Journal.

I am a peer reviewer for Obstetrics and Gynecology, which we call the Green Journal, the Journal of Maternal Fetal Medicine, the American Journal of Perinatology, and the International Journal of Gynecology and Obstetrics, and some other journals that have various permutations of all of those names.

Q. Have you received any honors or awards for teaching?

A. I have. Every year the graduating chief residents in our Obstetrics and Gynecology program recognize a faculty member for teaching. And I have received that award on three occasions: in 1998 and 2001 and 2003.

MS. PARKER: Your honor, may I approach the witness?

THE COURT: Yes.

[1716]

BY MS. PARKER:

Q. Dr. Chasen, I show you what has been marked as plaintiffs' Exhibit 24. Do you see that?

A. Yes.

Q. Is that a copy of your C.V.?

A. Yes, it is.

Q. Is it true and correct?

A. Yes, it is.

Q. And is it current?

A. It is.

MS. PARKER: Your Honor, I would like to offer Exhibit 24 into evidence.

THE COURT: Any objection?

MS. PARKER: Actually, I might note that the Exhibit 24 in the binder contained his expert report, because that was how it was introduced at the deposition, but we are only seeking to introduce the several pages that constitute his C.V.

THE COURT: Let me make sure I have that. Is it titled "Biographical Sketch"?

THE WITNESS: Yes.

THE COURT: All right. I have that. Any objection?

MR. QUINLIVAN: Subject to Ms. Parker's qualification that they are only seeking those three pages, we [1717] have no objection.

THE COURT: Those will be are taken apart from the other attachments.

MS. PARKER: We have done that with the formal exhibit, your honor.

THE COURT: Admitted.

THE CLERK: Twenty-four into evidence.

(Plaintiffs' Exhibit 24

was received in evidence.)

MS. PARKER: At this time, your Honor, we tender Dr. Chasen as an expert in obstetrics and gynecology, maternal fetal medicine and abortion practice and procedures pursuant to the federal rule of evidence 702.

THE COURT: Any objection?

MR. QUINLIVAN: No objection, your honor.

THE COURT: Any request to voir dire?

MR. QUINLIVAN: No.

THE COURT: All right. He will be accepted as qualified in those areas.

BY MS. PARKER:

Q. Dr. Chasen, you indicated that the majority of abortions you perform in the second-trimester are D&E's; is that right?

A. That is correct.

Q. What is your goal when you perform a D&E?

A. The overall goal is to end the pregnancy, which involves [1718] removing the fetus and the placenta from the uterus and to do so in a way to minimize the risk of complications to my patients.

Q. Could you describe briefly how you do the dilation portion of the D&E procedure?

A. The dilation portion of the procedure is a component of almost all of the procedures I do. There are some patients that I treat that may have conditions that almost invariably lead to spontaneous abortion or very, very, very premature labor.

These patients may present with advanced degrees of cervical dilation. So in these cases I don't do—I don't do this dilation procedure that I am about to describe.

But in the vast majority of patients the dilation procedure—I do the dilation procedure that involves placing the laminaria in the cervical canal. And depending on the gestational age, primarily, that will dictate whether I—how many placements of laminaria I will use.

Q. How many sets of laminaria do you typically use?

A. Broadly, with some exceptions, again, prior to 20 weeks in almost all cases I will use a single set of laminaria. in almost all cases after 20 weeks, I will do—I will do two sets of laminaria.

Q. What is the maximum number of laminaria that you typically use in your first set?

[1719]

A. In the first set—and, again, my goal in placing laminaria is to place as many as will fit in the cervix without forcing it in there. And this can depend on factors. The biggest factor is para of the patient. Women that have had a cervix dilate usually under happier circumstances, like in labor, their cervixes can be a bit more laminaria.

But, in general, with the first set of laminaria, which may be the only set in some patients, anywhere from two or three up to six.

Q. And when you do a second set—first, how far after—how many hours after the first set do you typically put in the second set?

A. In most patients who are outpatients I will typically do them 24 hours apart. In certain circumstances I can compress that time.

Q. How many do you generally insert in the second set of laminaria?

A. In most cases I will insert between eight and twelve. Laminaria come in different sizes. So the laminaria I will insert on the second insertion are bigger than the ones I will insert on the first insertion. But in most cases, eight to twelve.

Q. Have you ever had a patient become infected as a result of the insertion of laminaria?

A. The only case that I can recall involved a patient who was [1720] undergoing D&E because of the preterm premature rupture of membranes, or PPROM.

This patient was undergoing D&E precisely because she had some evidence of infection already. She had clear evidence of infection after laminaria insertion, but I think the infection preceded the laminaria insertion.

No patient who didn't have this condition have I seen an infection due to laminaria.

I start all patients on antibiotics on the day that I insert laminaria.

Q. Can you briefly describe the evacuation part of the D&E procedure?

A. Yes. I will try to do it briefly. The day after the last laminaria insertion, which before 20 weeks is usually the first and only laminaria insertion, patients arrive in the hospital. They are taken to the operating room.

After answering a whole lot of questions from nurses and anesthesiologists, they lie down. They receive an intravenous line. They receive anesthesia. And, again, at the discretion of the anesthesiologist, they will receive general anesthesia or they may receive sedation, intravenous sedation that is short of general anesthesia, but usually those patients are asleep, as well.

They are placed in stirrups. I remove the laminaria. Then, they receive a sterile wash. Sterile drapes [1721] are placed. The bladder is drained with a catheter.

And under anesthesia—once I have scrubbed and put on a sterile gown and gloves, I will do an examination under anesthesia, and sometimes, ultrasound as well.

At which time I will determine the degree of cervical dilation, the degree of cervical effacement or how thick—how long the cervix is, the proximity of the cervical opening to the vaginal opening, which can vary primarily based on whether women have gone through labor and had their pelvic muscles stretched before, the position of the fetus.

I can ascertain usually through a digital examination, but with ultrasound that I have, as well, in some cases. And I make a determination about what

the safest—at that time I determine what the safest way is to remove the fetus.

Q. And do you prepare a patient differently depending on what procedure you are considering doing?

A. The procedure in all cases is the D&E. Some variations of D&E that we will talk about, the intact D&E or the disarticulation with forceps, I don't prepare patients any differently, because, again, I don't determine what the appropriate technique or variation of D&E will be until the patient is under anesthesia and I examine them.

Q. How do you proceed at that point after you have done the assessment?

* * * * *

[1722]

A. After the assessment, if I think circumstances are such that—and, again, my goal is to remove the fetus with as little disarticulation as possible with forceps, and if possible, with no disarticulation with forceps or no introduction of forceps into the uterine cavity.

Q. Slow down.

A. So, if again, circumstances permit, I will proceed with a manual breech extraction of the fetus. And I will proceed with a breech extraction. In most cases the head will become lodged at the cervix. And in those cases I will typically make an incision with the scissors under direct visualization, because the base of the skull is in the cervix, and I can see it in almost all cases.

I make an incision, introduce suction, aspirate the contents of the brain tissue. And at that point, the size of the fetal head is decreased to the point where it will pass easily through the cervix.

In cases where I don't feel I can do a manual breech extraction, then I will proceed with forceps. In some cases I can, with the first pass of the forcep, remove one or both legs of the fetus from the uterus into the vagina without disarticulation. And in those cases I then can proceed with a breech extraction, as I have described before.

In most cases where I need to proceed with forceps, I will have to complete the case or remove the fetus with [1723] disarticulation. But my goal is to do as little disarticulation as possible and remove the fetus as intact as I can.

Q. At what time during the procedure do you decide whether to proceed with forceps or to do a manual extraction?

A. That's after I have done an examination under anesthesia. That's when I decide the safest way to proceed.

Q. Do you do more dilation for a patient when you are able to do the manual extraction?

A. The preoperative dilation or dilation portion is identical in all patients, and primarily that is based on the gestational age. In cases in which I am able to do an intact—the intact variation of D&E, those patients tend to have more dilation than patients in whom I must resort to forceps.

Q. So what factors influence which of the two approaches you will use?

A. Again, probably the most important, but certainly not the only factor is the degree of cervical dilation that is achieved. And it's achieved in most cases with laminaria. But other factors can include the effacement, or how long the cervix is. And, again, a lot of that relates to whether or not women have been through labor before.

Women who haven't been through labor before tend to have a cervix that may be considerably longer, which can make it difficult to do a breech extraction. The degree of [1724] relaxation of the pelvic floor can play a big role.

Women who have gone through labor before tend to have their pelvic floor muscles stretched, and the cervix maybe quite a bit closer to the vaginal opening, so my hand or a forcep does not need to travel as far to grasp the fetus and hopefully to do a breech extraction.

The position of the fetus plays a role in if it is in a breech presentation—and nearly half of the fetuses inthis gestational age may be—the lower extremities may be right above the cervix and may be easier to grasp.

If the fetus is presenting head first or transversely, then the lower extremities are not as accessible, either manually or with forceps. And some in some cases there is more room for manipulation within the uterus than in other cases.

And this can kind of depend on the volume of amniotic fluid and the degree of relaxation of the uterus. It tends to be more relaxed in a woman who has had labor before compared to a woman for whom it may be the first pregnancy.

So these are—there is no formula. These are all the factors I take into account.

Q. Do you convert the lie or the position of the fetus to achieve manual extraction?

A. Yes. Yes, I do.

Q. And how do you do that?

[1725]

A. In some cases, again, based on the factors that I have told you, in some cases I am able to, if all the factors I described in my prior answer are favorable, I can actually reach into the uterus and with my hands grasp one or both of the lower extremities and do it manually.

I have my other hand on the abdomen, and I can externally, by pressure on the abdomen also, try to turn the fetus in concert with the hand. Or in some cases a forcep in the uterus and ultrasound guidance is sometimes helpful in doing this podalic version.

Q. At what gestational ages do you typically perform the intact variation of D&E?

A. In most cases, but not all, it will be at or after 20 weeks.

Q. And do you sometimes remove an intact fetus earlier than 20 weeks?

A. In some cases I do.

Q. How early have you been able to do that?

A. I have done it as early as 14 or 15 weeks, I believe.

Q. Do you have a preference as to whether you're able to remove the fetus intact?

A. My preference is to remove a fetus with as little intervention as possible and with as little manipulation with forceps. Every time I insert a forcep into the uterine cavity I have the capacity to cause uterine rupture which ultrasound [1726] can't completely prevent. Every time of open the forcep with the intent of grasping the fetus, I can't be certain that I am not also grasping the wall of the uterus. And, again, ultrasound cannot always identify those cases.

So, my answer is that it's always with as little intervention with forceps as possible to remove the fetus, and with as little disarticulation, and preferably with none.

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[1730]

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Q. What conclusions did the study draw?

A. The primary conclusion or one primary conclusion was that the rate of spontaneous pre-term birth in this group of women who got pregnant following D&E was six and a half percent. And that that was consistent with the overall rate of spontaneous—consistent with the overall rate of spontaneous pre-term birth that we see in our hospital and that has been [1731] described nationally.

Another outcome that we looked at was the gestational age at which these women underwent abortion and how far the cervix was dilated at the time they underwent surgical abortion to see if this had any impact on the rate of spontaneous pre-term birth in their subsequent pregnancy.

And what we found was that in women that had D&E between 14 and 24 weeks, we actually found the trend towards lower rates of pre-term birth in women that had D&E in these later gestational periods within that interval. And when we looked further, we found a correlation, an inverse correlation, between preoperative cervical dilation and the rate of spontaneous preterm birth.

In other words, that the more cervical dilation was achieved prior it surgical evacuation, the D&E procedure, the lower risk, the risk of pre-term birth in the subsequent pregnancy was lower compared to women who had lesser degrees of cervical dilation in their D&E procedure.

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[17:33]

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Q. Did your study have any implications about the impact of second-trimester D&E on cervical incompetence?

A. Cervical incompetence, that is a terrible term to use especially in front of the patient, because they take it personal. But, we can say "cervical insufficiency."

But, anyway, this term implies a propensity for the cervix to dilate painlessly or not under the influence of labor contraction in the uterus. And this is a risk factor for a miscarriage in the second-trimester or preterm birth, as well.

And to the extent that D&E could or surgical abortion could damage the cervix and could predispose to this condition, we would be concerned. And, again, we didn't see this in the study. And the low rates of

spontaneous pre-term birth we saw in the whole cohort as a whole were even lower in those in whom the cervix was dilated more and at later gestational ages.

So to the extent that anyone could be concerned that osmotic dilation of the cervix with laminaria is something that could damage the cervix and predispose to cervical incompetence or pre-term birth, I think the study suggests that the opposite [1734] is true.

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[1735]

Q. So Dr. Chasen, now I would like to talk to you about another study that you performed.

MS. PARKER: Your Honor, can I approach the witness?

BY MS. PARKER:

Q. Dr. Chasen, I have handed you Plaintiffs' Exhibit 19, which is an article called "Dilation and Evacuation at or Equal to—Greater Than or Equal to 20 Weeks: Comparison of Operative Techniques." Do you see that?

A. Yes, I do.

Q. And has Exhibit 19 been accepted for publication?

A. It has been accepted for publication. It's in press for the American Journal of Obstetrics and Gynecology. These are the uncorrected proofs. The published version is almost identical to these uncorrected proofs.

Q. Right. And I neglected to note that it is copyrighted 2004 by Elsevier.

When is it scheduled for publication?

A. I believe, according to the publisher, the May edition of this year.

Q. What journal is it going to be published in?

A. The Gray Journal: American Journal of Obstetrics and Gynecology.

Q. What was the objective of the study that is described in this article?

A. The objective of the study was to look at women having D&E [1736] late in the second-trimester, at 20 weeks and beyond, and looks—and specifically divide them into two cohorts: women who had D&E with dismemberment with forceps versus women who had D&E with the variation we will call "intact extraction" or "intact D&E." And to compare outcomes, including complication rates from D&E. And a secondary objective was to look at subsequent pregnancy outcomes in these two cohorts of women.

Q. Whose idea was it to conduct the study?

A. It was my idea to conduct the study.

Q. What was your role on the study?

A. I was the principal investigator. I conceived of the study. I sought and received permission from the Institutional Review Board to conduct this retrospective study.

I designed the data sheet that my co-investigator—that some of my co-investigators would use to extract data from patient medical records.

I designed the database in which data would be entered. I did the statistical analysis myself. I wrote and revised the manuscript myself with appropriate input from my co-authors.

Q. Why did you conduct the study?

A. I conducted the study—and, again, this is true for all the studies that I have conducted and published in my career. I conducted the study, really, because to answer a question or questions. Any study that is out there that can be and should [17:37] be published, really, is to address a gap in medical knowledge that is in the literature.

There can be topics for which there aren't any published studies. There can be topics for which there are conflicting data.

This specific study the question, the medical question which, I think, unfortunately has boiled over into a legislative and judicial controversy, regards the safety of different variations of D&E that are used.

And there are medical questions which I'm primarily interested in about the safety of these different variations of D&E. Of course, others are interested in other forums for other reasons.

But it was really to answer questions that are, indeed, medical controversies and looking at our data, sharing our data in the peer review literature, to fill in, I think, what is—what most people would agree is a gap in the peer review literature.

Q. Did you conduct the study for this litigation?

A. I did not.

Q. Were there any preexisting published data comparing the safety of the two variants of D&E?

A. Not that I am aware of. Not that anyone that I know of is aware of, so I would answer: no.

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[1739]

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Q. And you indicated you examined two different variants of D&E. So did you distinguish between them for purposes of this study?

A. Yes, we did.

Q. What did you call the two variants in the study?

A. It underwent an evolution in different versions of the manuscript. The first version mirrors my clinical practice and how I describe these things. That there was—the two variations were D&E with disarticulation and D&E with intact extraction.

As this went through peer review, it was suggested that we—that that was a little verbose and that we talk about—we use the term that ACOG had used "intact dilation and extraction," or "D&X."

So I think the second version talked about D&E, dilation and evacuation and dilation and extraction. And in the final variation, which is the one that will be published, we added the word "intact" in front of—before "dilation and extraction," just to create more of a contrast for the readers.

There was dilation and evacuation and intact dilation and extraction.

But based on the title of the study and based on the [1740] introduction, it is very clear that these were all D&E procedures and they were dealing with two variations.

Q. And how did you distinguish between the intact and disarticulation procedures when you were reviewing the medical records?

A. Well, we reviewed the operative reports. And at our teaching institution, in most cases residents or fellows will dictate their operative reports, and usually they will really dictate everything in using a lot of detail. So we were able to differentiate, primarily, by looking at the dictated operative reports which technique was used.

* * * * *

[1745]

Q. What did your study conclude?

A. Our study concluded that in these women late in the second-trimester undergoing D&E that the overall rate of complications, most of which were minor, was 5 percent, and that there was no significant difference in the complication rate between those women undergoing D&E with intact extraction compared to those women undergoing D&E with disarticulation.

Q. Now, you indicated the rate was 5 percent overall? What was the complication rate for the D&E's analyzed in both groups?

A. It was 4.9 percent, or I think 13 out of 263 for the D&E with disarticulation, compared with 4.9 percent compared with 5.0 percent or six out of 120 in women undergoing D&E with intact extraction.

Q. What does the complication rate of roughly 5 percent reveal about both of these variations of D&E?

A. I think it reveals that these—especially given that almost all of the—that all but three of these complications would be considered minor, this is a—that these are safe.

Both variations of D&E should be considered safe.

Q. How many complications were reported in the study?

A. Total of 19.

Q. What kind of complications did you observe?

A. I think more than half of the complications were genital tract lacerations. I think most of those were cervical—[1746] superficial cervical lacerations, really, at the site of the tenaculum or the clamp that holds the cervix in place. There were some lacerations involving the labia, I think.

There were other complications. They included a few patients that needed curettage after they went to the recovery room. A couple patients who got readmitted for having bleeding and required curettage. And there were three severe complications.

Q. So there was three severe complications out of 383 patients?

A. That's right.

Q. And what were those?

A. These three complications; one woman had uterine perforation, and she unfortunately required a hysterectomy.

One woman had an amniotic fluid embolism, and she was admitted to the intensive care unit, and she required transfusion of blood and blood products.

And another woman had a disseminated body wide infection and sepsis, which was a life-threatening condition, and she required admission to the intensive care unit.

And during that admission, she was also diagnosed with pulmonary embolism, which is a blood

clot that lodges in the blood vessels and in the lung, which is also a life-threatening complication.

Q. And what variant of D&E did the three women who experienced [1747] the severe complications have?

A. All three of these women had D&E with disarticulation.

Q. Did you find that the difference in terms of severe complications between the two variants at a level of statistical significance?

A. No. It was a 1.1 percent rate of severe complications in the women who had D&E with disarticulation compared to 0 percent, none, in the women who had D&E with intact extraction. But that did not approach the level of statistical significance.

Q. Were there differences in the demographics of the two groups, patients that were in the study?

A. There were some important differences in the demographics.

Starting with the indication for having the procedure, a significantly higher proportion of women who had D&E with intact extraction had it because they had advanced cervical dilation or they had pre-term premature rupture of membrane syndrome, or PPROM, both of which are associated with high risk—high rates of uterine infections.

The women that underwent D&E with intact extraction were at significantly advanced degrees of gestation, that the median gestational age in this group was 23 weeks compared to a median gestational age of only 21 weeks in the women that had D&E with disarticulation.

Q. Is that difference in gestational age significant?

[1748]

A. It was highly statistically significant. The probability that this difference occurred purely as a matter of chance and didn't represent a true difference was less than one in a thousand.

Q. Why is it significant?

A. It is significant because, again, the literature that is out there is consistent with the notion that complications of D&E or any type of abortion, including medical abortion, increase with advancing gestational age.

So, in that the women that had D&E with intact extraction were at significantly more advanced gestational ages compared to those that had D&E with disarticulation, that these women would be expected to be at high risk of complication.

Q. So you would expect more complications at a later gestational age?

A. Absolutely.

Q. But you didn't find that?

A. We did not find that.

Q. Did the study keep track of the amount of blood loss for both intact D&E and the D&E with disarticulation groups?

A. It did.

Q. And what were the results regarding the amount of blood loss?

A. The results, the median blood loss of 100 milliliters was the same in both groups. The groups that had the highest [1749] rates, that the cases where there

were the highest degrees of blood loss were in the disarticulation group. But as a whole, looking at the distributions, they were not statistically significant between the two groups.

Q. Did you keep track of the procedure time for both intact D&E and the D&E with disarticulation groups?

A. We did.

Q. And what were the results regarding the procedure time comparing the two groups?

A. Similar to the blood loss. The median time of 22 minutes for using both variants was identical. The longest cases in the series—in this series were in the disarticulation group.

But, again, it wasn't a statistical—statistically significant difference in operating time between the two cohorts.

Q. You also indicated that the study looked at obstetric outcomes. Did the study find a difference in the obstetric outcomes of subsequent pregnancies between the two groups?

A. We did not.

Q. And what did the study find?

A. The study found in the 62—there were 62 patients who had subsequent pregnancies in our hospital, 45—and the proportions of the two variants were roughly the same as in the overall study.

Forty-five of these women had—with subsequent [1750] pregnancies had D&E with disarticulation, compared to 17 who had subsequent pregnancy who had D&E with intact extraction.

The variable we looked at was the rate of spontaneous pre-term birth. Two women in each of the groups had subsequent spontaneous pre-term birth. Two out of 45 was between four and five percent. Two out of 17 was between 11 and 12 percent. That difference did not approach statistical significance.

Q. What is the import of those results regarding obstetric outcomes?

A. Well, the other thing that we note in the "result" section of the study that is important to consider is that the two women out of the 17 that had D&E with intact extraction who had a spontaneous pre-term birth, both underwent abortion in the prior pregnancy because they had evidence of—that they would inevitably miscarry or deliver very prematurely.

One of these women had advance degrees of cervical dilation at around 23 weeks, and the other one had ruptured her membranes at 23 weeks, as well. So these two women, one delivered at 32 weeks in the next pregnancy, and one delivered at 35 weeks in the next pregnancy.

These two women, if they hadn't been touched, if they didn't have a D&E, or if they delivered spontaneously or medical induction or didn't have an intervention would be considered at very, very high risk for spontaneous pre-term [1751] birth in the next pregnancy.

And, indeed, these women had much, much, you know, much more successful obstetric outcomes in the prior pregnancy after undergoing D&E with intact extraction.

So to sum it all up, based on the data with subsequent obstetric outcomes, we do not see any

evidence that intact extraction increases the risk of spontaneous pre-term birth when that risk does not already exist.

Q. You indicated you looked at 62 women who had had subsequent pregnancies?

A. Yes.

Q. Is that number a sufficient number on which to base the conclusions that you've drawn?

A. I think it's a sufficient number to say that if there is any impact upon the D&E overall, or the specific variation of D&E, that the impact or the relative impact in terms of risk of spontaneous pre-term birth is likely to be small.

Q. What was the overall conclusion of your study as to the relative safety of the two variations of D&E?

A. The overall conclusion—and this being the first study that has looked at this topic, I think we were appropriately conservative in our conclusions. The overall conclusion is that these are both safe procedures, and that the complication rates in the subsequent pregnancy outcomes, with the caveats that I have described already, appear to be comparable. And [1752] that sort of the take-home message is that the appropriate way to perform a D&E at these gestational ages should be based on the intraoperative judgments of the physician.

Now, in the conclusion, you know, we also speculate that in the 120 women who had D&E with intact extraction that the—that it is very likely—that we think it is likely that the ability for us to use our judgment, to implement our judgment and to use this technique, or variation of D&E, likely avoided some of

the complications, and especially severe complications that were seen in the other cohort patients.

Q. Do you have an opinion as to what the study shows about the relative safety of the two variants?

A. Yes.

Q. What is that opinion?

A. Again, the opinion expressed in the paper—and is a valid opinion—is that they are both safe procedures. But I think in looking at the data, I conclude that D&E intact extraction could have safety advantages.

Q. Why is that?

A. Again, the two cohort patients were not the same. And to me, the most salient differences with were the gestational ages, the women having D&E with intact extraction were at more advanced gestational ages. And the higher proportion of them were undergoing D&E because they had ruptured membranes or significant degrees of cervical dilation, both of which are [1753] associated with complications.

Because the intact extraction cohort would be expected, very reasonably, to have higher rates of complications, and we, in fact, did not see that, and we saw fewer, although not statistically significant difference, but we didn't see any severe complications, that this suggests that the ability to use the intact extraction variation of D&E is safer and does—and when it is feasible does prevent complications.

Q. Do any other results from your study support your opinion that intact D&E may, in fact, be safer?

A. Yes.

Q. What are those results?

A. As we described, similar to the overall rate of complications, the intraoperative blood loss and the operating times, because with the advanced gestational ages that we saw in the intact extraction cohort, we would expect—and, you know, the medians were 21 and 23 weeks in the two groups.

The size of the fetus at 23 weeks, based on weight, is approximately 50 percent more than the size of a 21 week fetus. The size of the—the relative placental sizes also would probably correspond to that difference. That I would expect that removing the fetus and placenta at those gestational ages would take longer.

So, again, I think that the data are consistent [1754] with—if we didn't see any difference in operating—any significant difference in operating times in the two cohorts of patients, that that suggests that use of intact extraction can shorten operative times.

And, again, shorter operative times probably reflects shorter blood loss and less anesthesia exposure and would lower the complication risk and increase the safety.

And, again, looking at blood loss, again the same factors that we talked about. With increasing gestational age, the uterus is bigger. The amount of blood that the heart pumps to the uterus is more. Operative times may be more.

So, again, these are increased risks of hemorrhage. And to the extent that we didn't see any significant difference in the rates of blood loss, and we saw nonsignificant differences in the rate of transfusion, again, this suggests that the rate of blood loss—that

that use of the intact variation of D&E prevents or minimizes blood loss.

MS. PARKER: Your Honor, I am ready to move to the next topic, but I notice it is about 10:00.

THE COURT: Yes. I think it is time for our first break of the morning. We will break for 15 minutes.

(Recess taken at 10:00 a.m.)

(Proceedings resumed at 10:18 a.m.)

THE COURT: All right. Please continue.

[1755]

BY MS. PARKER:

Q. Dr. Chasen, we have been talking about two studies that you performed. I would now like to move to talking about your opinions based more on your clinical experience.

Do you have an opinion regarding the safety of intact D&E variant as compared to the disarticulation variant of D&E?

A. Yes, I do.

Q. What is that opinion?

A. My opinion is that in cases in which the intact extraction variant can be performed that this is a safer procedure than D&E with disarticulation.

Q. And why can intact D&E variant be the safest way to perform a D&E?

A. As I said before, my objective in performing any D&E is to remove the fetus and the placenta with a minimal amount of intervention. Every time I introduce a forcep into the uterus I run a risk of perforation. And every time I open the forcep and

grasp what I hope is fetal or placental tissue I could be grasping the uterine wall, and I could risk perforation.

My objective is to remove the fetus and placenta with as little of this type of manipulation as possible, and the intact variation of D&E allows me to do that.

Q. Have you ever perforated a uterus during a D&E procedure?

A. Yes, I have.

[1756]

Q Have you ever perforated a uterus or had a cervical laceration during an intact variation of the D&E procedure?

A. I have never had an uterine perforation with the intact variation of D&E. The few cervical lacerations I have had have been at the site of the tenaculum. It hasn't involved trauma to the cervix and removal of the fetus.

Q. In addition to the risks of laceration or perforation, are there other advantages to the intact variation of D&E?

A. Yes, I think so. In disarticulating the fetus and the dismemberment using the forceps, there can be sharp edges or boney fragments exposed that are not exposed in intact extraction. And in removing these from the uterus, that could risk trauma to the uterine wall or to the cervix.

And in the intact variation of D&E the boney fragments are not exposed at all to the maternal tissues. In that the procedure, based on my experience, can be accomplished more quickly when considering

gestational age, this would reduce the risk of infection and reduce the risk of blood loss, as well.

From wearing my hat, you know, as a maternal fetal medicine specialist and as a maternal fetal medicine specialist a lot of what I deal with are fetal abnormalities, which may involve genetic conditions, and these are a lot of my cases.

And a lot of my patients are terminating because of a fetal abnormality. And in some of these cases it may be due to a [1757] genetic cause. And there may be a significant risk of recurrence.

There are some D&E's I perform when we have a diagnosis, if I do an amniocentesis and the chromosomes are abnormal with Down's syndrome being most common, I have a diagnosis.

But there are other cases where usually based on ultrasound we can see clearly that there is something very abnormal about the fetus, and very often we can speculate upon the severity and really know that it is really a severe abnormality, but we don't have a diagnosis. And many different specific syndromes may have caused what we are seeing on ultrasound, but we don't know what.

In these cases the ability to do an autopsy for a trained pathologist, like I have at my hospital, to look at the fetal specimen and examine it can yield important information that could lead to a specific diagnosis, and that can lead to being able to do early prenatal diagnosis in a future pregnancy if a genetic test is identified. Or just in terms of counseling a patient about what the recurrence risk is.

And many patients, you know, what is most important to them is knowing why. These patients tend to be devastated.

They are devastated, all of them. And lot of it, what can contribute in no small measure is just not knowing what it is.

Q. So one of the advantages to an intact D&E is to have an [1758] intact fetus in order to do a pathology?

A. In a case where we can remove the fetus without having any disarticulation, then that increases the possibility—or decreases the possibility that any meaningful structure that may be abnormal may be damaged beyond recognition in doing disarticulation.

Q. Wouldn't that be an advantage to an induction, as well, the ability to get an intact fetus?

A. It could be. But there are a few other issues to consider.

In an induction, very commonly the fetus will not be delivered alive. In the course of an induction, it is not uncommon for the fetus to expire during the procedure. Induction—and the time between the death of the fetus and the time of the delivery can be many hours or it may be more than 24 hours. So by the time the fetus delivers, and intact, many of the structures that may be most relevant in achieving a diagnosis may have undergone a process called "maceration" where a type of degradation where important information may not be able to be obtained.

The other part about the induction is that we can never guarantee that the fetus will be able to be delivered by induction. And I think in most series suggest five to 10 percent of not being able to

successfully delivery the fetus with induction because of our ability, under many conditions, to not be able to duplicate the processes of labor [1759] pharmacologically.

So, a minority, but a real thing. It happens in a minority of occasions. But any woman having a medical induction may not deliver through medical induction, and she may need to subsequently have a D&E.

So, again, I can't guarantee any woman under either scenario that she'll deliver an intact fetus.

Q. In your opinion, does intact D&E offer safety advantages for women carrying fetuses with specific types of fetal anomalies?

A. Yes. Probably the most common scenario here is a condition called "hydrocephalus" in which there is typically obstruction in the flow of cerebral spinal fluid, or brain and spinal fluid, and that causes an accumulation of fluid in the brain.

And, typically, that—or very often that will result in the size the fetal head being disproportionately larger, oftentimes very much larger, than the gestational age that the fetus is.

And in these cases in doing a disarticulation, and in the process of disarticulation the fetal skull really needs to be grasped and crushed with forceps. And if the head is significantly larger than the gestational age would dictate, then the—I may need to open the forceps to a very wide degree. And the wider I open the forceps, the more likely I am to traumatize or perforate the uterus.

[1760]

In doing D&E using intact extraction, the fetus is delivered as a breech, and the head comes down to the same level of the cervix as in any other D&E with intact extraction.

And it lodges similarly in the cervix. And under direct visualization, I can make an incision with scissors and decompress the head the same way with the suction.

So there isn't the risk of—there isn't a risk of needing to open forceps to a wide enough degree to crush the fetal skull in those cases. There are other cases where certain anomalies, other portions of the fetal anatomy can be distorted and be enlarged. There is a condition known as "hydrops," which is not a specific diagnosis, but it is a condition very akin to heart failure, where fluid can accumulate to sometimes an enormous degree in certain cavities. And it can accumulate in the abdominal cavity. And the abdominal cavity can sometimes be very, very large.

And, again, the same problem will happen in trying to crush this part of the fetus with forceps could expose a woman to a greater degree of risk than in moving this part of the fetus through the breech extraction to a much lower part of the uterus.

Q. I have one follow-up question on hydrocephalus. Could you use a procedure called cephalocentesis to reduce the size of the head?

[1761]

A. Cephalocentesis can be used. And I published on this, and I have done it in a handful of cases in women closer to term to avoid having to do a c-section.

Q. So why don't you first describe what cephalocentesis is and then—

A. Cephalocentesis is a procedure in which a needle is placed through the fetal skull, and the fluid that has accumulated in a fetus with hydrocephalus can be removed. Sometimes liters of fluid can be removed. And the size of the head can be normal or closer to normal.

In the case of hydrocephalus in a woman undergoing a D&E, cephalocentesis is something that can be done. However, the condition—after it is done, the fluid can reaccumulate rapidly.

I have had one case I can recall in a woman in labor at term where I removed several liters of fluid. The head was reduced to a normal size. And then, by the time she was ready to deliver several hours later, the fluid had reaccumulated and the size of the head was as big as it had been before.

So doing a cephalocentesis prior to laminaria insertion or prior to being in the operating room would run the risk of needing to repeat this procedure.

And if I waited until the time of delivery of the cephalocentesis, the problem is that cephalocentesis is a destructive procedure. Most fetuses that have this procedure [1762] done during the process of labor or in the process of a D&E, it is a destructive procedure, and it results in a high rate of fetal death.

So, if I did a cephalocentesis—if I reduce the size of the fetal head by cephalocentesis while I am doing a D&E, rather than decrease the fetal head, as I have described before, I think that would violate the act.

Q. In your opinion, does the intact variation of D&E offer safety advantages for women with particular maternal health conditions?

A. Some of the cases I do because of deteriorating maternal health. And, again, the way I do a D&E with the dilation and how I choose a procedure doesn't differ between them. The way I dilate the cervix and the appropriate procedure I am choosing in the operating room doesn't differ at all.

But what is different in these women who are in a tenuous medical state is that these are the women least able to tolerate any complication, be it hemorrhage or uterine perforation or something else.

So to the extent that I believe that the ability to use intact extraction minimizes the risk of complications in all women, in these women who are least able to tolerate a complication would be most threatened by it. The ability to use intact extraction, based on my judgment is particularly—is a particular safety advantage in these women.

[1763]

Q. Let's talk specifically about patients who have a particular risk for blood loss or hemorrhage. Does the intact variation offer safety advantages for them?

A. As we discussed, I think it is my opinion—I think that the data in the studies is consistent with this—that in all women the ability to use intact extraction can decrease operative time and minimize blood loss.

Women that may be anemic, such as women with advanced—women on chemotherapy or women with other advanced stages of medical illness, these women are, again, most likely to be injured by hemorrhage.

And many of these women are technically prone to hemorrhage, because not only is their blood count low, but their concentration of clotting factors may be low, as well.

So these women are particularly prone to hemorrhage and particularly prone to suffer from hemorrhage. And, again, in that I believe that the ability to use intact extraction when doing a D&E, when in my judgment that I can do that, that would avoid—minimize the risk of these complications that could be particularly harmful to such a patient.

Q. Does the intact variation offer safety advantages for patients who need an abortion urgently to protect their health?

A. Yes, I think it does.

Q. What type of conditions would lead a woman to need to have an abortion more quickly than otherwise?

[1764]

A. Women with—the physiology of pregnancy or the physiologic changes of pregnancy are most likely to effect women who have heart disease. And oftentime these women tolerate the changes well until the second-trimester when the changes become most pronounced. And we can see marked deterioration so that we know if the pregnancy continues, that they would be at risk of death or other severe complications.

So we know that in a woman like this, or perhaps in a woman who—the rare woman who has severe preeclampsia develop in the second-trimester, and we know that if that woman is not delivered of the fetus in a relatively short amount of time, that this woman could die or sustain other dreaded complications.

It is not that the pregnancy needs to end in a matter of minutes or even in a matter of a few hours, but it is urgent enough that it really needs to be done within the next day or two.

And I think in these women I think D&E—and specifically using intact extraction—is a preferred choice, if possible.

Q. Would women with severe cardiac conditions, would induction be an option for them?

A. Induction might be an option. The problem with induction is that for a sustained amount of time the induction method, in that it causes, by nature, labor. And every time the uterus [1765] contracts that causes physiologic changes in the body. The uterus contracts and gets smaller. A lot of blood that's in the uterine circulation gets injected into the general circulation. And in women with deteriorating cardiac health, this exposes them to a prolonged period of jeopardy.

Contrast that to a D&E procedure. The cervix is not dilated through a process of labor. It is dilated with osmotic dilators that typically doesn't cause contractions. Doesn't change body wide changes in physiology. And I wouldn't expect that procedure of dilation to effect their cardiac status.

When the evacuation occurs, all the physiologic changes, when the uterus—when after the fetus and placenta are removed, then the uterus contracts down, and the physiologic changes happen, it happens in a very controlled setting. The patient is under anesthesia with an anesthesiologist who is very skilled in critical care right there. It is expected. It is anticipated.

Whereas, the delivery, the labor and the delivery in medical induction, we don't know how long it is going

to take, if it is going to be successful, whether it is going to take 12 hours, 24 hours or longer. And it exposes the patients to a prolonged duration of the these changes that they may not tolerate.

Q. Would a hysterotomy be an option for women with severe cardiac conditions?

[1766]

A. I think the only time when hysterotomy is indicated is in a woman who is in cardiac arrest, needs cardiopulmonary resuscitation or CPR, and you need to empty the uterus in a matter of minutes to save the maternal life.

Only in that circumstance, I think, is hysterotomy indicated. Hysterotomy, which is like doing a c-section, is the most invasive way—it is the most invasive thing you can do. It would be associated with the highest rate of complications, including infection, hemorrhage.

And, again, if a woman is having deteriorating medical condition and she needs to deliver, that would be the last thing that I would want to have to resort to.

And either induction or D&E would be preferable. And, again, for the reasons I have stated I think D&E is preferable to induction in these women.

Q. Are there other conditions where a woman might need to have an abortion more rapidly to protect her health?

You've talked about cardiac conditions.

A. Sure, there are. If a woman has an infection, and, again, some women they may have an infection. They may have had an amniocentesis a couple weeks ago, and

that could introduce bacteria into the uterus and cause an infection. They may be in pre-term labor, which can happen in the second-trimester, or they may have ruptured the membranes, both of which can be preceded by infection or both of which can lead to an infection [1767] in the uterus. These women are at risk of experiencing sepsis, which is a life-threatening condition with a body wide infection if the pregnancy is continued.

These women may need to be delivered urgently. And I think that D&E is the safest way to treat these women.

Q. Would you ever recommend an induction procedure for women who need an abortion immediately due to an emergent health condition?

A. The problem with an induction is that, again, in addition to the problems I have stated about the changes in physiology in women that may not be able to tolerate these changes is that an induction can take hours or it can take days where it may not be successful at all.

A D&E, I can replace laminaria at eight hours or 12 hours, so I can achieve the same degree of dilation that I would achieve at 48 hours in the normal case in a much compressed time interval. And I—it's a much more reliable time frame in which I can end the pregnancy that needs to be needed for a medical reason.

Q. And for those patients, would the entire D&E process occur in the hospital?

A. Yes, it would.

Q. And would you ever do a hysterotomy for women with any of those conditions?

A. Again, given that it is the most invasive thing that would [1768] lead to the highest rate of short-term complications, and also it would be most likely to effect their future pregnancies, no.

I would not, except, as I say in a woman that needs to be delivered that minute to do CPR or to resuscitate her.

Q. What procedure would you perform if a woman came to you at 20 weeks LMP who had had two previous vaginal deliveries, a bleeding placenta previa and clotting disorder?

A. In any woman with a placenta previa—that is a condition in which the placenta covers the cervix. In any woman with placenta previa, labor is contraindicated. That is a term that's medical induction if an abortion is done in the second-trimester.

So my choice is in such a woman would be hysterotomy. And I pretty much expressed how I feel with that, in general, or D&E. And in my experience I have taken care of women with placenta previa, in the circumstances you are describing. And in a hospital setting, I would insert laminaria. In my experience in the cases I have done it has not led to hemorrhage, and we have had enough time to achieve dilation of the cervix so that a D&E could be performed, and these women don't need a hysterotomy.

Q. What about a woman who came to you with three previous cesarean deliveries, evidence of placenta accreta and is presenting at 22 weeks LMP, what procedure would you recommend under that circumstance?

[1769]

MR. QUINLIVAN: Your Honor, I object to this question, and I move to strike the previous question. Neither of these situations were addressed either in Dr. Chasen's expert report or during his deposition.

THE COURT: All right. Those are the parameters.

MS. PARKER: What?

THE COURT: Those are the parameters, unless it is for impeachment or rebuttal or something of that with nature.

MS. PARKER: He is a rebuttal witness, your honor, and Dr. Cook expressly was given these two scenarios as hypotheticals. And he gave an opinion as to what procedure he would perform for these two scenarios. And we are presenting Dr. Chasen as a rebuttal expert on that.

THE COURT: Okay. I am going to permit it. He wasn't designated, obviously, except as a witness in your case-in-chief. I do think it is appropriate to use him now in rebuttal to Dr. Cook.

BY MS. PARKER:

Q. Do you need me to repeat the question or you have it firmly in your head?

A. I have it firmly in my head. And before I answer that question, I think, you know, I haven't mentioned it yet, but women with—who have had a prior c-section or any other procedure leaving a scar in the uterus are particularly at risk for uterine rupture if they undergo labor under any [1770] circumstance, at term or in the context of a medical abortion.

So, I consider that a relative contraindication to medical induction in any patient with a prior c-section, for instance.

Now, in the patient you just described who has had, I think, three prior c-sections?

Q. Yes.

A. Three prior c-sections and placenta accreta that was suspected based on ultrasound, I think. Placenta accreta is a condition that we can strongly suspect based on ultrasound findings in which the placenta is abnormally adherent to the wall of the uterus because it is sort of growing into the scar of the uterus.

In a woman like this, placenta accreta is associated with—in many cases these women ultimately have a hysterectomy or ultimately require a hysterectomy. However, in some cases the placenta, indeed, is abnormally adherent to the wall of the uterus. The placenta can be left in sight. It can be left there in a woman who may not be bleeding after removal of the fetus. And, you know, it's—we have had several cases in my hospital, and there are several cases published in medical literature that over a long period of time the placenta may either be absorbed by the body or it may detach and deliver days or weeks later.

In a patient like this, I think she is a candidate |1771| for a D&E. However, in the course of the D&E I would not want to disrupt the placenta, because, again, if I pull on the placenta and the placenta is abnormally adherent to the wall of the uterus, that could perforate the uterus.

So I would want to be able to do a D&E where I would want to be able to remove the fetus without disrupting the placenta. That is something I can do

with a lot of confidence using the intact extraction variation of D&E.

When I use forceps to disarticulate the fetus, in any given pass, I can also be disrupting the placenta. And, again, that would, in this patient in particular, would run a particular risk of uterine rupture.

Q. Now, you've indicated that in the majority of circumstances your preference is to do a D&E, and, if possible, an intact D&E. But do you discuss with your patients the option of induction?

A. I discuss with all of my patients options, unless they have a life-threatening condition, and, really, in my opinion they must end the pregnancy, I discuss the options of continuing the pregnancy, and what that would entail, as well as the option of medical induction, yes.

Q. And in your experience is induction a safe method of abortion?

A. For most women induction is a safe method of bortion.

Q. In your experience, which method of abortion is safer, [1772] induction or D&E?

A. In my experience, D&E is a safer method of abortion.

Q. Why is that?

A. The complication rates associated with D&E are lower than the complication rates associated with induction. And I believe nationwide data supports lower rates of mortality, which, to me, suggests also lower rates of complications.

I think there is less of a risk of bleeding and less of a risk of infection. Women undergoing induction need to be hospitalized compared to women having D&E where, in most cases, it is done as an outpatient procedure, although this gets into patient preference, as well.

And a significant proportion of patients undergoing induction will not expel the placenta, and then they need an evasive surgical procedure to remove that.

And in some cases they will not expel the fetus in part, or at all, and then they may need to have a D&E, which under these circumstances would be riskier than doing a D&E that doesn't precede a medical induction.

Q. Based on your experience which is the more common procedure throughout the second-trimester, induction or D&E?

A. D&E.

Q. And why do most women choose D&E over induction?

A. I think when it is available and women are presented with the two options, I think most women—not all—but most [1773] women express a preference for D&E compared to induction.

Q. And do you have an opinion as to why that is?

A. Yes. Again, induction is a procedure that is done in the hospital. With all my patients they feel like they have been struck by lightening. And, you know, they have had something devastating and unexpected happen.

And when they are informed that induction can take 12 hours or it can take 48 hours or it cannot be successful at all, that's something that is distressing to very many of them who are already distressed.

When they have to be hospitalized instead of being at home where they are more likely to have a support system intact, I think that is meaningful to a lot of women.

Women who—

MR. QUINLIVAN: Your Honor, I have to object. It seems to me that he is speculating as to what women may feel. He—if a woman has told him directly, that is one thing, but I object—

THE COURT: The objection is sustained. We have allowed this kind of testimony from other witnesses who are able to establish the foundation that they obtained this knowledge through in their own patient practice.

You haven't established such a foundation with him.

MS. PARKER: That is fine. I can do that, your Honor. And I think we are almost wrapping this line of [1774] questioning up, anyway.

BY MS. PARKER:

Q. All right. Dr. Chasen, you indicated that when patients come to you you discuss with them the various options; is that right?

A. Yes, it is.

Q. And do your patients—do you have a discussion with your patients about what options are available?

A. Yes, I do.

Q. And then, do you talk to them about which options they want to pursue?

A. Yes, I do. I describe what either option will entail, either of the three options, including continuing the pregnancy would entail.

Q. In the course of that do your patients describe to you their preferences for particular procedures?

A. They certainly do.

Q. And why they want a particular procedure over another one?

A. Yes, they do.

Q. And in the course of that, do they discuss with you why they prefer the D&E procedure over the induction procedure?

A. Often, in great detail and with great emphasis.

THE COURT: All right.

BY MS. PARKER:

Q. I don't know if you finished your testimony about why your [1775] patients preferred D&E's over induction.

A. I think—

THE COURT: I want to make sure your testimony is based upon your patients and not speculation as to other patients.

THE WITNESS: No. No, it is not speculative. This is what women tell me. This is what my patients have told me. That is how I know how they feel.

I talked about the more predictable nature of when a D&E will start and when it will be completed. I talked about women's preference for not being

hospitalized. Many of my patients—most of my patients are professional women. And they—in many cases, their colleagues may not even know they are pregnant, or they may not have disclosed that.

And they can go to work after they have had laminaria placed, and then they take, you know, only one or two days off. Rather than having to be hospitalized and to lose more time.

So, for variety of reasons I think they—my patients, in general, express a strong preference for an outpatient procedure rather than an inpatient procedure.

Another big issue is going through labor. That women—I am not a woman, but I am an obstetrician. And I think I—women regard, not inappropriately, labor as a very painful procedure.

[1776]

Women undergoing induction do get appropriate analgesic that usually consists of epidural anesthesia, but they are awake throughout the procedure. Epidural doesn't remove all painful sensations.

And most women express a preference for not wanting to be awake and aware of what is going on during delivery.

So I think these are all reasons why the patients that I see who know that D&E performed in a safe setting by an experienced practitioner like me or my colleagues who do this are far preferable than medical induction.

BY MS. PARKER:

Q. Do you have an opinion as to whether inducing labor between 20 and 23 weeks is a more physiological process than a D&E procedure?

A. Yes, I do have an opinion.

MR. QUINLIVAN: Your honor, I want to note my objection for the record. This, again, is an issue that was not raised in Dr. Chasen's expert report nor addressed in his deposition.

THE COURT: All right.

MS. PARKER: It is rebuttal.

THE COURT: To Dr. Cook?

MS. PARKER: Yes, your Honor.

THE COURT: It is unfortunate, obviously, that the plaintiff was unable to call the witness after because [1777] obviously you wouldn't have had this opportunity but for the scheduling difficulty to have a rebuttal witness. But he is here, and Dr. Cook did testify as to these specific things, so you are permitted to go beyond the deposition and expert report, but only to the extent that he is regarding specific testimony given by one of the defense witnesses.

MS. PARKER: This is specific testimony, as your Honor recalls, that was given by Dr. Cook.

THE COURT: All right.

THE WITNESS: Can you repeat the question?

BY MS. PARKER:

Q. Yes. What is your opinion as to whether inducing labor between 20 and 24 weeks is a more physiological process than the D&E procedure?

A. I don't agree with that.

Q. And why not?

A. First of all, our ability to mimic a natural physiologic process in inducing labor, or our inability to do that is one of the big, big public health issues that is confronting obstetrics, in general, today. Regarding our ability to do it in women at term, we are not that good at it, and that is one of the reasons that has contributed to rising cesarean section rates, an increased use of induction of labor and our inability to mimic a natural physiologic process that is in labor.

And women who are remote from term, who are, most [1778] likely, very remote from the onset of the natural physiologic labor process, induction of labor is even more challenging.

And the—and we—our techniques may have improved. Misoprostol is, I think, an improvement over old pharmacologic forms of inducing labor, but we are not able to mimic the natural physiologic changes of labor, the natural intensity of uterine contractions or anything similar to it.

So I do not think that this is a physiologic process at all that we induce with medical induction.

Q. Would a women experience the same level of physiological stress by undergoing 24 hours of dilation following laminaria insertion than she would by undergoing 24 hours of labor?

A. She would experience less physiologic changes or stress, certainly, with the laminaria insertion. Laminaria exert osmotic effect on the cervix in that local area of her body.

In general, it does not induce labor. Or if it does, in very rare cases. It typically doesn't cause

contractions in the uterus. And it does not cause systemic or body wide physiologic changes as happen when labor occurs naturally or when we make an attempt to make it occur unnaturally.

Q. A few more questions about the complications of induction. You indicated that, I think, retained placenta was a complication of induction?

A. Yes.

* * * * *

[1779]

Q. And how often does that occur?

A. I think based on our experience at my hospital, as well as published studies, I think it occurs ten to twenty percent of the time.

Q. Have you ever seen an induction fail?

A. Yes.

Q. And why could it fail?

A. Again, because of our inability, using the most current methods of pharmacologic intervention to initiate or to try to mimic a natural physiologic process. Some women don't respond to whatever formulation of prostaglandin or pitocin that we try to use.

In some of them we just can't induce labor. Not most of the time, but it can happen some of the time.

Q. How would you go about evacuating the uterus if the induction failed?

A. If the induction failed, then the best option would be D&E.

Q. And have you seen inductions where the fetus is partially delivered up to the calvarium and then becomes trapped?

A. Yes, I have.

Q. And what do you do under those circumstances?

A. Under those circumstances I think the least invasive and if—if the mother doesn't have—if she is not bleeding a lot, or she doesn't have any urgent need for immediate delivery, an option is to do nothing.

[1780]

Now, again, in an awake patient who can perceive this fetus in her vagina and portions of external to her, that is often not an acceptable alternative, doing nothing and waiting. Some women, the placenta may have detached. She may be bleeding heavily, so urgent intervention is necessary.

The options here could include something called Duhrssen's incisions, which are when the cervix is incised so that a trapped fetal head could delivery. That is a very invasive procedure that could cause hemorrhage or other complications.

And that is something that, I think, could damage the cervix and lead to cervical incompetence, not that I like that term, in the future.

Another very invasive thing, obviously, would be hysterotomy. I think the least worse alternative in that circumstance is to do what I would do in the course of an intact extraction while I am doing a D&E, to make an incision at the base of the skull and to suction out the brain tissue so that the head could pass through the cervix easily.

Q. Do you routinely use either KCl or digoxin to cause fetal demise before starting to evacuate the uterus in a D&E procedure?

A. I do not.

Q. Why not?

A. In the D&E procedure, it doesn't facilitate the procedure. [1781] It does not make it easier. A procedure like this, the patient is awake. It is, in most women, not associated with a great deal of pain, but in some women it may be.

The cases that are easy may only take a few minutes, but many cases aren't easy, and it could take a long time to do that.

In my hospital, we don't use digoxin. We use potassium chloride. And we inject that either directly into the umbilical cord or into the heart of the fetus.

And, again, in some cases for technical reasons this can be extremely difficult or impossible to do. Some women are very obese. Some women have an abnormal uterus that may have very large fibroids between—that make it difficult to navigate.

Some women may have be carrying a fetus with an abnormality associated with no amniotic fluid or she may have ruptured her membranes and have no amniotic fluid. And the lack of amniotic fluid can severely compromise our ability to see anything with ultrasound, because the ability to visualize things on ultrasound depends on a liquid/solid contrast so that the sound waves can penetrate.

So without that contrast with no amniotic fluid we oftentimes are very limited in our ability to an ultrasound-guided procedure.

Another reason is if there is a fetal abnormality [1782] for which evaluation by a pathologist can produce useful information, inducing fetal death in advance of D&E could, again, cause the process of maceration or degradation of fetal tissue to begin. And, again, that could cause a loss of information that could be useful otherwise.

Q. Have you ever cut the umbilical cord to cause fetal demise before evacuating the uterus in a D&E procedure?

A. Not with that intention, no.

Q. Do you generally cut the cord?

A. Not with that intention. I don't specifically do it as a specific step in the procedure to be done prior to anything else.

Q. And why not?

A. It doesn't facilitate the procedure. The cord may be not easily accessible in some cases. If I am doing a manipulation in the uterus, either with my hands or with forceps, with the only intent being to grasp the cord and cut it, I am not doing anything that is going to facilitate the procedure that I am there to do.

It could prolong the operative time, and it could increase the risk of complications. So I don't do that.

Q. Dr. Chasen, you are familiar with the Partial-Birth Abortion Ban Act, are you not?

A. Yes, I am.

THE COURT: Excuse me. Before you change subjects, [1783] I want to make sure I understood. You said at your institution you don't generally use digoxin, but you do on occasion use potassium chloride?

THE WITNESS: Yes.

THE COURT: Okay. All right.

BY MS. PARKER:

Q. So you are familiar with the Partial-Birth Abortion Ban Act of 2003?

A. Indeed I am.

Q. You are a plaintiff in the New York case; is that right?

A. Yes, it is.

Q. And you are currently covered by the injunction in that case?

A. Yes, I am.

Q. I have put up on the easel the operative portion of that act. Is it your opinion that the way you perform a D&E abortion would violate the act?

A. It may.

Q. Why is that?

A. When I do a D&E with intact extraction, then I think that could violate the act based on my interpretation of the sequence of the steps listed there.

When I am doing a D&E and I have made the decisionto proceed with disarticulation with forceps, the act doesn't say a thing about a fetus being delivered intact. It only [1784] describes one portion of the fetus being delivered before an overt act that I know will kill the partially delivered living fetus.

It is not my practice to document after every step in a D&E whether the fetus is alive or not, because, again, that doesn't facilitate any step of the case, and it could prolong it if I stop and consider that in every case.

And I can and I am sure I have in certain cases removed or delivered a portion of the fetus above the umbilicus outside the mother. And I have no doubt in some of these cases the fetus is still alive. And every time that I am introducing the forceps, my purpose is to remove the fetus. It's an overt act.

And I know that any time I introduce the forceps, I could do something. And, again, it is my intention to remove the fetus. And every time I perform such an overt act I know it could kill this fetus, portions of which I have removed already.

So I don't have any doubt, personally, that this act could cover any D&E that I do on a living fetus.

Q. Is it your opinion you would violate the act by the way you perform an induction abortion?

A. There are scenarios I can foresee in an induction abortion that could also violate the act.

MR. QUINLIVAN: Objection, your Honor. I don't [1785] think there has been any testimony that the witness does induction abortions.

THE COURT: I don't recall he has. You need to establish that.

MS. PARKER: I thought I had asked him that at the beginning of the—way at the beginning of the examination, but I will ask him that question.

BY MS. PARKER:

Q. Do you perform induction abortions?

A. Much less commonly than I do D&E, but, yes, that is something that I have done and can do.

Q. And is it your opinion that you would violate the act by the way that you would perform an induction abortion?

A. Again, I can foresee a scenario that could occur in which the induction abortion could violate the act.

Q. And what is that scenario?

A. Again, I could have a patient in the process of being induced could partially expel a fetus. For instance, the breech-presenting fetus could be expelled, partially, whereby the degree of cervical dilation could accommodate the fetus up to, but not including the head. The head could become entrapped in the cervix. A woman could be bleeding heavily, and I may need to do something quickly and emergently to complete the procedure in this patient that may be hemorrhaging.

[1786]

And what I could do to this fetus who may be alive could violate the act. That is true in a normal fetus. It may be especially true in a fetus with hydrocephalus, for instance.

Q. Do you manage spontaneous miscarriages as part of your practice?

A. I do.

Q Is it your opinion you would violate the act in the way you monitor spontaneous miscarriages?

A. I could.

Q. How could that happen?

A. Again, spontaneous miscarriage—again, some of the women that I do a D&E are in the stage of having a spontaneous miscarriage. They may be dilating the cervix. They may have ruptured their membranes. And

so a minority of patients on whom I do a D&E are in the process of having a spontaneous abortion.

Patients having a spontaneous abortion could present to me with the scenario that I just described with an induction. A patient in an advanced stage of labor in which the breech-presenting fetus is expelled, but the head is trapped within the cervix.

And, again, she may be bleeding heavily at that point. The delivery may be yet need to be accomplished quickly.

And under those scenarios I can do a hysterotomy, [1787] which I think is a terribly invasive and completely unindicated procedure in this circumstance to free the entrapped head.

I could do Duhrssen's incisions. And I feel that that is a very inappropriate thing to do.

And, again, in this case the most appropriate thing to do would be to make an incision at the base of the skull, decrease the size of the head, as I've described, and in this fetus that may be alive, that would violate the act, in my opinion.

Q. If the injunction were lifted, what impact would the act have on your practice?

A. It would have an impact, and not a good one. I would have to—in doing a D&E, I would have to consider every step that I am doing, not—when I am taking care of a patient, I think I want—and I especially think the patient and her family want me to have my full and undivided attention devoted to her, taking care of her.

If I am worried that anything I am doing in the process of doing a D&E could violate the act, then I may

do things differently. I may not be able to proceed as deliberately. I may prolong the case, because I am concerned about being prosecuted for taking care of my patient using my best medical judgment. And my patient could be harmed.

Q. And what impact would the act have on your patients?

A. My patients, they may not seek out a surgical abortion.

[1788]

Again, many with the passage of—

MR. QUINLIVAN: Objection, speculation, Your Honor.

THE COURT: Sustained.

BY MS. PARKER:

Q. Do you have an opinion as to what impact the act would have on your patients that is based on your own experience and counseling your patients?

A. Yes, I do.

Q. What is that?

A. I have many patients over the last year or two who are aware of attempts to limit my use of my medical judgment, or any obstetrician's medical judgment, in banning certain types of procedures to abortion. And more than a few patients have asked me if I am going to be doing a partial-birth abortion, or they may use the term "intact D&E." If I can do it, and specifically after this bill was enacted, they have expressed concerned about whether I can still take care of them or about whether they would be forced to

endure an induction that the thought of which they dreaded.

So if I were not covered by a restraining order or if this act were in effect, my patients might be under the false impression that they would have to have an induction. They may feel that they had to have an additional procedure, potassium chloride injection.

MR. QUINLIVAN: Objection, your Honor. He is now * * *.

* * * * *

[CHASEN—CROSS EXAMINATION]

[1794]

Q. And the reason you were only able to follow-up with pregnancy outcomes of 81 of those women is because some of the other women may have gone to their referring obstetricians; isn't that right?

A. Other women undoubtedly did go to their referring obstetricians.

Q. And in doing that study, you didn't follow up with women who went to, say, back to their referring obstetricians or to other obstetricians?

A. We did not.

Q. And you would agree, doctor, would you not, that the quality of your conclusion in that study may depend on the number of patients that you are able to follow-up at your institution?

A. It may.

Q. And you would agree, also, doctor, that the patients who underwent a D&E procedure at your

hospital and delivered elsewhere may have had a higher or lower rate of spontaneous birth?

A. As we acknowledge in the paper.

Q. And your answer is: yes?

A. Yes.

Q. Okay. Now, let's turn to your more recent study, which I believe is Plaintiffs' Exhibit 19.

Is it fair to say that the objective of your study [1795] was to compare the relative safety of two techniques for surgical abortion late in the second-trimester?

A. Yes.

Q. And, in fact, that is what you said on the first page of your study in the objective section; isn't that right?

A. That's correct.

Q. And the two techniques that were being compared as defined in the study were dilation and evacuation and intact dilation and extraction?

A. Those were the two variations of dilation and evacuation that we were comparing.

Q. Let me talk—let's talk a little bit about the description or the—or how you described the intact dilation and extraction or intact D&X.

A. Yes.

Q. In reviewing the medical records, you determined that if the fetus was delivered intact in the breech presentation to the level of the umbilicus or higher, the procedure was considered an intact dilation and extraction; is that right?

A. That is correct.

Q. And just to be clear, in laymen's terms the umbilicus is where the umbilical cord attaches to the fetus, right?

A. The best laymen's term is the belly button, yes.

Q. I was just about to ask for those of us, after the belly button is cut or after the umbilical cord is cut, that is your [1796] navel or belly button, right?

A. Yes.

Q. And if the fetus was delivered intact in the breech presentation to the level of the umbilicus or higher, you considered that to be an intact dilation and extraction, whether or not the entire fetus was removed intact or decompression of the head was required, right?

A. That is correct.

Q. And you selected breech presentation to the level of the umbilicus or higher, because the umbilicus is an easily identified landmark that you could identify, right?

A. That is correct.

Q. Now, there was another situation which might fall in the intact D&X category, and that was where the fetus was in the vertex or headfirst presentation, right?

A. Correct.

Q. And if the fetus was presenting headfirst, and the fetus' head was decompressed with suction, followed by an intact delivery of the fetus, that, for purposes of your study, constituted an intact D&X?

A. That is correct.

Q. Now, doctor, your study does not include all patients who had surgical abortions at Cornell during the period under your review; isn't that right?

A. That is correct.

* * * * *

[1809] of your study.

A. Yes.

Q. In the right-hand column, the second to last paragraph. The last sentence of the second to last paragraph you stated:

> "Because our approach is to perform intact D&X when possible on the basis of cervical dilation and fetal position, it is unlikely that intact D&X could have been performed in these patients undergoing dilation and evacuation who experienced severe complications."

Those were your records, right, doctor?

A. Yes.

Q. And I think—is it a fair statement to say that you perform an intact D&X whenever you're able to, so the fact that a D&E procedure was performed in those patients suggests that you couldn't perform an intact D&X in those three cases?

A. As I will readily acknowledge.

Q. Now, doctor, you also testified on direct examination that you believe your study supports the comparative safety of the intact D&X procedure because of the higher gestational age in the intact D&X group as compared to the D&E group?

A. Yes.

Q. But you don't make any such claim in your article, do you?

A. In the discussion we make reference to that.

Q. But you don't claim in that discussion that the intact D&X [1810] procedure is safer because of the higher comparative gestational age. That is not one of the conclusions of your paper, is it?

A. No. Our conclusions were conservative.

Q. In fact, because this is a retrospective study, the data will not support a statement that one technique is safer or superior to the other, correct?

A. That's correct.

Q. And you said as much in your article; isn't that right, Doctor?

A. Yes.

Q. And turning back, again, your attention to page 4 in the left-hand-column, in the middle of the page, the last sentence of the paragraph beginning "our approach," it states:

> "Though we believe our low complication rate validates our approach, we knowledge that the retrospective nature of this study precludes us from concluding with certainty that intact D&X prevented adverse outcomes."

Those were your words, right, Doctor?

A. Those are the words.

Q. Now, doctor, am I correct that you could have stratified the gestational ages? You could have compared intact D&X procedures as compared to D&E

procedures at different gestational ages? Say at 21 weeks, 22 weeks and 23 weeks?

* * * * *

[1820] intact D&X procedure is rarely used in cases of maternal medical condition?

A. Preoperative indication that maternal medical conditions are a small minority of the cases that we do.

Q. You would also agree, Doctor, that if a woman was experiencing a severe medical condition or had a fetal anomaly that would impact your choice of either performing an intact D&X or D&E procedure; is that right?

A. That's right. It would be based on my intraoperative judgment about what would be safest.

Q. And, in fact, you don't take steps in any cases involving maternal health conditions or fetal anomalies to ensure that you were going to end up with an intact D&X procedure, do you?

A. No, because I can't ensure that.

Q. Now, you also testified that in some cases of fetal anomalies you think the intact D&X procedure offers some advantages in terms of pathology?

A. Yes.

Q. But a labor induction, you acknowledge, would also offer an intact specimen for purposes of pathological assessment, correct?

A. In most cases it would.

Q. Am I correct, doctor, that there are some fetal anomalies where it is important to examine the content of the brain matter?

* * * * *

[1822] you could do the cephalocentesis process again; isn't that right?

A. It could, and I have.

Q Doctor, am I correct that in your opinion an intact D&X procedure is never the only available procedure to terminate a second-trimester pregnancy?

A. That is correct.

MR. QUINLIVAN: Moving on to my last subject, your Honor.

BY MR. QUINLIVAN:

Q. Let's talk about injections for a little bit. You testified you don't normally use an injection of potassium chloride or digoxin, right?

A. In most cases I do not.

Q. But you do offer injections of potassium chloride if the woman requests it, correct?

A. That's correct.

Q. Your institution has a policy of offering injections of potassium chloride after 24 weeks; isn't that right?

A. We don't do abortions on fetuses after 24 weeks.

Q. Well, doctor, I believe that one of the cases in your study was a fetus at 26 weeks and 27 weeks gestational age?

A. Spontaneous fetal demise.

Q. After 23 weeks gestational age you offer the woman the option of having an injection by potassium chloride; is that * * *.

[1825]

[STEPHEN T. CHASEN, M.D.—REDIRECT EXAMINATION]

BY MS. PARKER:

Q. Dr. Chasen, Mr. Quinlivan asked you about the study that is going to be published this spring. Did your participation in the New York litigation introduce bias into that study in any way?

A. No.

Q. And why is that?

A. My purpose in participating as a plaintiff was to ensure that I could take care of my patients consistent with my medical judgment in the best way I can to take—provide the best care I could.

My objective in doing the study, as in any study, is to answer a question or attempt to contribute—or nothing resolves certain controversies—but to contribute to the literature in a way that could give relevant or meaningful information regarding anything that isn't resolved, and few things in medicine are resolved.

It gives me no pleasure in doing D&E, whatever technique I do. And there is—you know, the only reason why I want to be able to use my judgment and perform a D&E with intact extraction when I can is because based on my experience and expertise, that is the best way I can take care of my patients.

I did the study because there is no published data.

[1826]

Now, based on my opinion and experience prior to doing the study, I didn't perceive the risks that have been asserted in the absence of any data regarding this procedure.

But, if those risks did exist, or there were circumstances where this variation of D&E were to appear risky to some women, or to be disadvantageous relative to D&E with disarticulation, that would be very meaningful information to me, and perhaps to my colleagues in the profession, who do these procedures in terms of how we can best take care of our patients.

My capacity as a researcher and an author, my capacity as a physician who takes care of patients, and my capacity as a plaintiff in any judicial proceedings are not in any way conflicted with each other.

And, again, I don't take any pleasure from doing intact extraction compared to disarticulation. I do take satisfaction in providing the best care I can to my patients and helping them in what is very difficult time in their lives and trying not to make it any harder.

Q. Are any of the other authors of that study plaintiffs in the New York litigation?

A. No, they are not.

Q. Mr. Quinlivan also asked you some questions about your expertise with induction abortions.

A. Yes.

[1827]

Q. Is that a procedure that you teach in your teaching capacities?

A. Yes, it is.

Q. And do you have expertise in performing induction abortions?

A. I do. What I stated was I don't have special expertise compared to my colleagues. And there are many more obstetricians in my department who have expertise in induction who don't do D&E's. I do have special expertise in D&E. I have equivalent expertise to many physicians in performing inductions. So—but that is that.

Q. And why don't you perform induction abortions more regularly?

A. Again, in my capacity as a maternal fetal medicine specialist and my teaching, administrative and research capacities, I don't have a whole lot of time to do a lot of abortion procedures. That doesn't constitute the main aspect of my clinical care. It is a small minority of it.

And, again, I do those cases for which I have special expertise. And D&E certainly qualifies as that. And given I don't have an obstetric practice, I don't have my own private prenatal patients. And women who want to have an induction, in general, they are cared for by their obstetricians and they are not referred to me for an induction.

That's why almost all the cases I do are D&E and not [1828] inductions. It's not because I lack any requisite expertise in induction.

Q. On cross you testified in response, again, to some questions about the safety study that the data don't support a conclusion that intact D&E prevented adverse outcomes given the retrospective nature of the study; is that right?

A. I think I said "we can't conclude with certainty."

Q. But do you have a medical opinion about that?

A. I do.

Q. And what is the medical opinion?

A. My medical opinion is that these 120 cases that were able to be completed with intact extraction at a median gestational age at 23 weeks that, number one, I think it is very impressive that no major complications was seen in any of these women.

And that if I or my colleague in doing these procedures did not have the ability to implement our best medical judgment, and specifically were precluded from performing intact extraction, that I really don't have much doubt, having done these procedures, that some of these 120 patients, not most, but some, would have experienced major complications.

Q. And you also were asked some questions about, I believe, 62 patients who had subsequent pregnancies in the second study that you conducted. Given the limited number of those for whom you could assess the subsequent pregnancy outcomes after D&E's, [1829] why did you include the data in your study?

A. I included the data—and, again, I think this was contained in a letter to the responding—to the peer review, there isn't any data out there. Some data is always better than no data.

Would it have been better if we had triple or quadruple number of patients? Sure. But given the large lacuna in the medical knowledge regarding this specific—

THE COURT: What was that word, doctor?

THE WITNESS: "Lacuna." It means a gap. Sorry.

That given that I think it is valuable data, and I think —and it was acceptable to the editors of this journal who did not think it should be removed.

And, again, I think I would emphasize that none of the patients who wouldn't have been considered high risk based on their obstetric history that didn't even experience spontaneous pre-term birth in the next pregnancy who had intact extraction.

BY MS. PARKER:

Q. And there were also some questions about the two women who had intact D&E's and subsequently had pre-term birth?

A. Yes.

Q. Do you recall that? And in your clinical judgment, what is the most likely reason that they had pre-term births?

A. Well, honestly, there is a nobel prize for whoever can [1830] unravel the mystery of pre-term birth. So I don't know. But what I do know is that when you are assessing risk for pre-term birth, the strongest risk factor you can have is a history of a prior pre-term birth or a prior second-trimester pregnancy loss.

So, any maternal fetal medicine specialist should look at this and conclude that, again, without even touching these patients or regardless of how their pregnancies ended with whatever procedure, or naturally, that these women would be considered very high risk to deliver in the future.

And that I have no doubt that these—and that related to what happened or compared to what happened in the pregnancies that were ended with D&E, that they had markedly improved pregnancy outcomes in their next pregnancy.

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

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No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC. AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

*v.*

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, IN HIS OFFICIAL CAPACITY, DEFENDANT

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**TRANSCRIPT OF TRIAL PROCEEDINGS**

Apr. 8, 2004
Volume 6

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BEFORE THE HONORABLE
PHYLLIS J. HAMILTON, JUDGE

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APPEARANCES:

FOR PLAINTIFFS:

BINGHAM MCCUTCHEON LLP
Three Embarcadero Center
San Francisco, California 94111-4003

By: BETH H. PARKER, Attorney at Law
DEBORAH ADLER, Esquire

Planned Parenthood Federation of America
434 W. 33rd Street
New York, New York 10001

By: EVE C. GARTNER, Esquire

Planned Parenthood Federation of America
1780 Massachusetts Avenue, N.W.
Washington, D.C. 200036

By: HELENE T. KRASNOFF, Esquire

FOR INTERVENOR PLAINTIFFS CITY AND COUNTY OF SAN FRANCISCO:

Office of the City Attorney
1390 Market Street, Suite 1008
San Francsico, California 94102

By: KATHLEEN SUZANNE MORRIS
ALEETA MARIE VAN RUNKLE
Deputy City Attorneys

FOR DEFENDANT:

U.S. Department of Justice
20 Massachusetts Avenue, N.W. Room 7128
Washington, D.C. 20530

By: MARK THOMAS QUINLIVAN,
W. SCOTT SIMPSON,
KALIA MARIE CLARK,
Assistant U.S. Attorneys

* * * * *

[WATSON BOWES, JR., M.D.—DIRECT EXAMINATION]

[873]

THE WITNESS: B-O-W-E-S.

THE CLERK: Thank you.

BY MR. QUINLIVAN:

Q. Good morning, Dr. Bowes. Welcome.

A. Thank you. Good morning.

Q. Dr. Bowes, are you affiliated with any academic institutions?

A. Yes, I am. I am emeritus professor of obstetrics and gynecology at the University of North Carolina in Chapel Hill.

Q. Can you tell us what that means to be an emeritus professor?

A. It essentially means I have retired from my clinical practice, although I still have some other responsibilities on the faculty.

Q. Doctor, are you licensed to practice medicine?

A. I am.

Q. In what state or states?

A. I am licensed to practice in North Carolina. I was previously licensed to practice in Colorado, as well, but that license is now inactive.

Q. Doctor, are you board certified in any fields?

A. Yes, I am board certified in obstetrics and gynecology and also in the subspecialty of maternal fetal medicine.

Q. Can you briefly explain what the subspecialty of maternal [874] fetal medicine is?

A. The subspecialty of maternal fetal medicine is—deals largely with problems of fetal diagnosis, fetal therapy, in other aspects as high risk pregnancies.

MR. QUINLIVAN: Your honor, may I approach the witness?

THE COURT: Yes.

BY MR. QUINLIVAN:

Q. Doctor, I am showing you what has been marked as defendant's exhibit A-2, and I would like you to identify that, please.

A. This is my curriculum vitae.

Q. Did you prepare it?

A. Yes, I did.

Q. Is it current?

A. Yes, it is.

Q. Is there anything in your curriculum vitae that is inaccurate?

A. Not to my knowledge.

MR. QUINLIVAN: Your Honor, at this time I move the admission of defendant's exhibit A-2.

THE COURT: Any objection?

MS. KRASNOFF: No objection, your honor.

THE COURT: Admitted.

THE CLERK: A-2 into evidence.

[875]

(Defendant's Exhibit A-2 was received in evidence.)

BY MR. QUINLIVAN:

Q. Doctor, I would like to ask you some questions about your professional background. When did you receive your medical degree?

A. 1959.

Q. And following medical school, can you briefly summarize your post-graduate education?

A. Following my graduation from medical school, I had an internship at the Mary Hitchcock Hospital in

Hanover, New Hampshire, which is affiliated with Dartmouth's medical school.

Then, I had a one-year residency in general practice at the University of Colorado medical center in Denver. This was followed by a one-year fellowship in fetal physiology at the same institution.

Thereafter, I spent three years as a resident in Obstetrics and Gynecology at the University of Colorado Medical Center in Denver. And that completed my formal training.

Q. Following your post-graduate education, did you have occasion to practice in the field of obstetrics and gynecology?

A. Yes, I did. From 1965 until 1967 I was in a private practice of obstetrics and gynecology in Denver, Colorado, and at the same time was a part-time faculty member at the University of Colorado Medical Center.

[876]

Q. What were your responsibilities as a part-time faculty member at the University of Colorado?

A. I was a member of the Department of Obstetrics and Gynecology, and my primary responsibilities were in the teaching of medical students, and developing medical student curriculum for obstetrics and gynecology and teaching residents that were in Obstetrics and Gynecology.

Q. Doctor, following private practice, you then joined the military?

A. Well, yes. I was invited to participate in 1967. I spent two years in the U.S. Army Medical Corps during

those two years, and was stationed at Madigan General Hospital in Tacoma, Washington.

Q. What were your responsibilities at Madigan General Hospital in Tacoma, Washington?

A. For most of the time I was assigned to the ob/gyn service. At that time it was a large teaching service with residents, and my responsibilities were to supervise and teach residents at that service.

Another portion of the time I was actually assigned to services as a general medical officer.

Q. Doctor, what was your rank during your tenure or your time in the U.S. Medical Corps?

A. When I entered the medical corps, I was a captain. And when I left the Medical Corps I was a major.

[877]

Q. Were you honorably discharged?

A. Yes, I was.

Q. Doctor, following your military service, did you then continue your career in academia?

A. Yes, I returned to Denver, Colorado, where I was a full-time—appointed to the full-time faculty at the University of Colorado Medical Center in the Department of Obstetrics and Gynecology.

Q. And what positions or academic titles did you have while at the University of Colorado?

A. I was initially an assistant professor and was promoted over the years there to associate professor, and finally to a full professor in the department.

Q. And can you give us a brief description of your responsibilities while a faculty member at the University of Colorado?

A. My responsibilities included three areas. One was the teaching and supervision of medical students, residents and fellows in obstetrics and gynecology.

I was also involved in doing research, supervising research, helping residents and fellows develop research protocols and so forth.

And I was also a member of the group practice of faculty members at the University of Colorado which we offered or provided care for patients in that practice.

[878]

Q. Doctor, you mentioned your research responsibilities or activities. Did you focus on any particular area of research while at the University of Colorado?

A. My major area of research at the University of Colorado was the treatment of a disease called erythroblastosis. That's the RH factor and its effect on fetuses, RH incompatability between mothers and babies. And we developed the fetal transfusion techniques for that disease.

Q. Doctor, did you have occasion to leave the University of Colorado at some point?

A. In 1982, I joined the faculty at the University of North Carolina where I have been since that time.

Q. And what positions or titles did you hold while at the University of North Carolina?

A. Well, throughout my time on the active faculty there, I was a full professor.

Q. And can you briefly describe your responsibilities as a member of the faculty at the University of North Carolina?

A. Well, my responsibilities at the University of North Carolina were quite similar to those at the University of Colorado. I supervised obstetrical and gynecological residents. I helped in the education of the medical students.

I was active in developing research protocols and performing research, clinical research. And I also participated in the group practice among the faculty members [879] that provided care to patients.

Q. Doctor, similar to my question about your research interests at the University of Colorado, did you focus on any particular area of research while at the University of North Carolina?

A. We were—I participated in the fetal therapy that was going on at the time, including the treatment of RH disease and other fetal conditions and also was involved in other research on high-risk pregnancies. These are pregnancies which involve medical diseases during pregnancies, diabetes and so forth.

Q. Doctor, did you serve is a member of any review committees while at the University of North Carolina?

A. Yes. In 1984, the medical school established the infant [illegible] was actually the hospital connected with the medical school—established an infant care review committee. And I was chairman of that committee from 1984 until approximately 1995, when that committee was absorbed into a larger ethics committee of the hospital.

Q. And what was the infant care review committee?

A. The infant care review committee had the responsibility of reviewing all cases in which medical care was either withheld or withdrawn from a critically-ill infant.

Q. And what were your responsibilities as chairman of that committee?

A. We supervised—I supervised and led the discussions at [880] the meetings in which these cases were presented, inviting the interested parties who could contribute to the conversation and oversaw the deliberations of the committee in making some decisions about those cases.

Q. Doctor, you mentioned you are now retired?

A. Yes.

Q. Do you currently see patients?

A. I do not see patients clinically, no, I do not.

Q. And when was the last time that you clinically saw patients?

A. 1999.

Q. Do you still maintain an active association with the University of North Carolina?

A. Yes, I have. I am a member and have been a member of what is called the Institutional Review Board. And that is the committee that oversees or reviews research protocols that are submitted for approval before those research studies are conducted.

Q. And how long have you been a member of the Institutional Review Board?

A. Little over five years.

Q. And outside of the Institutional Review Board, do you have any other duties or responsibilities as an emeritus professor?

A. I participate in teaching conferences and have small seminars with the OB/GYN residents from time to time.

[881]

Q. Doctor, over the course of your professional career, have you had occasion to become familiar with the medical techniques to perform abortions?

A. Yes I have.

Q. Can you describe for the court how you have become familiar with those procedures?

A. I have been—during my residency education, we were taught procedures that were involved in completing what were called "incomplete spontaneous abortions" or missed abortions. This is where the fetus dies early in pregnancy. Also we had pregnancy terminations for fetal deaths. And also during that time there were induced abortions for medical complications, medical or psychiatric complications in pregnancy.

Q. Can you tell us what particular techniques of abortion you were taught?

A. I was taught at that time three techniques: the technique of dilatation curettage for early abortions, later the suction curettage was introduced as a technique that was used. And for second-trimester abortions at that time we were doing labor induction-type of abortions.

Q. And have you subsequent or subsequent to your residency did you become familiar with other methods of abortion?

A. Yes, later—and this was when I was at the University of North Carolina—the D&E procedure had been developed as an alternative to the labor induction abortions in the [882] second-trimester.

Q. Can you tell us what a "D&E" means?

A. D&E, it's—those terms mean dilatation and evacuation. Dilatation of the cervix, dilating the cervix of the uterus and then evacuating the contents of the uterus with either instruments or suction devices.

Q. Doctor, can you estimate how many abortion procedures you have performed during your career?

A. Well, if we can separate those into those procedures we were completing pregnancies which a fetal death or early spontaneous death of a fetus had occurred, in the second-trimester probably 150 of those procedures. Of procedures which were done earlier in pregnancy, many more than that, because that is a much more common complication, so I can't give you an exact figure.

For induced abortions, abortions in which abortion was performed with a living fetus, far fewer. Maybe five to 10. I don't know the exact number, but it is a small number during my time at the University of North Carolina in which the procedures were performed. And probably 10 or 15 at the University of Colorado.

Q. Doctor, you mentioned only a small number of induced abortions. Do you have a philosophical or

ethical position regarding the circumstances in which you will perform abortions?

[883]

A. Yes, I do.

Q. Can you tell us what that is?

A. I believe that induced abortions are indicated only when there are medical complications that are a serious threat to the mother's life.

Q. Now, doctor, have you had occasions in your practice in which one of your patients chose to terminate her pregnancy for a condition other than one which would put her life at risk?

A. Yes.

Q. What would you do in those circumstances?

A. In those circumstances I've always recommended the patient see one of my colleagues who has different feelings about abortion than I do.

Almost all my patients are well-aware of my feelings about this. But I recommend that they get care from one of my other colleagues.

Q. Doctor, have you ever addressed the ethical obligations of a pro-life obstetrician and gynecologist in any published work?

A. Yes, a number of years ago or several years ago, two of my colleagues and I wrote an article that was published in the New England Journal of Medicine that was in response to an article that had appeared suggesting that a doctor who would not do abortions should not be a maternal fetal medicine specialist. And we were simply responding to that assertion.

Q. Doctor, are you a member of any professional associations?

[884]

A. I am a member of the American College of Obstetricians and Gynecologists and the Society for Maternal Fetal Medicine.

Q. Is the American College of Obstetricians and Gynecologists oftentimes referred by the acronym ACOG?

A. Yes, it is.

Q. Have you severed in any special capacity with ACOG?

A. Yes. For five years I was a member of the ACOG's committee on ethics. And for three of those years I chaired that committee.

Q. And what were your responsibilities as chairman of that committee?

A. My responsibility was to organize and lead the discussions of that committee that dealt with various ethical issues in obstetrics and gynecology, and prepare written reports that would then be disseminated to the fellowship or the membership of ACOG on those various topics.

Q. Doctor, are you—

THE COURT: Excuse me.

MR. QUINLIVAN: Yes.

THE COURT: I just want to clarify something the doctor said. You indicated that of the five to 10 induced abortions that you have performed, that those

were indicated because of medical problems or conditions of the mothers, correct?

[885]

THE WITNESS: Yes, ma'am. These are the ones at the University of North Carolina.

THE COURT: Okay. And of the 150 or so other procedures, I am assuming we are referring to D&E's; is that correct?

THE WITNESS: No, ma'am. Some would be D&E's. But some were also procedures done by the labor induction methods. And those were procedures I was referring to in which the fetus had died. These were done to complete a pregnancy when a fetal death occurred.

THE COURT: All 150 of those?

THE WITNESS: Yes.

THE COURT: Okay. All right. Thank you.

BY MR. QUINLIVAN:

Q. Doctor, just to clarify one point, you had mentioned five to 10 occasions in which you performed an abortion in which the life of the mother was at risk. Do you recall the specific number?

A. I don't recall the exact number. I don't have documents, but my recollection is that I think two or three were D&E's in which I was the supervising physician with the resident. The resident and I performed the procedure.

And the others were induction procedures.

Q. Doctor, are you currently involved in any scholarly activities in the field of obstetrics and gynecology?

[886]

A. Yes. My primary scholarly activity is the serving as the co-Editor-in-Chief of the journal entitled Obstetrical and Gynecological survey.

Q. And how long have you served as co-Editor-in-Chief of that journal?

A. I served in that capacity since 1992, so for 12 years.

Q. Can you tell us what Obstetrical and Gynecological survey is?

A. It is a journal now about over 50 years old that publishes abstracts from the wider medical literature on topics related to obstetrics and gynecology. These abstracts are each followed by a commentary written by one of the four co-editors.

And the journal also publishes review articles, two or three each month, on topics related to subjects in obstetrics and gynecology.

Q. Can you tell us what your responsibilities as a co-Editor-in-Chief of that journal are?

A. My responsibilities are threefold: one is to review the medical literature and select the abstracts that we publish; second, to write the commentaries about those articles; and, third, to review manuscripts that are sent to the journal to be considered for publication and to assess those articles and select those that we will publish.

Q. How often is Obstetrical and Gynecological survey published?

[887]

A. Monthly.

Q. And can you approximate how many journals you review a month in your service as co-Editor-in-Chief?

A. We review approximately 100 journals over a period of time to select the articles that we will abstract for the journal.

MR. QUINLIVAN: Your Honor, may I approach the witness?

BY MR. QUINLIVAN:

Q. Doctor, I am handing you what has been marked as defendant's exhibit 56. Are you familiar with that document?

A. Yes, I am.

Q. And without commenting on the substance, can you just tell us what that document is?

A. This is an article that—a review article that we published in the Obstetrical and Gynecological Survey.

Q. And is that an example of the kinds of review articles that you have been discussing?

A. Yes, it is.

Q. Doctor, are you a peer reviewer for any other journals?

A. Yes, I am.

Q. And what journals would those be?

A. I review articles primarily for two journals: Obstetrics and Gynecology. This is the official journal of the American College of Obstetricians and Gynecologists, and also for the American Journal of Obstetrics and Gynecology.

[888]

Q. How long have you been a peer reviewer for those journals?

A. At least 10 years.

Q. Are you a peer reviewer for any other journals?

A. From time to time articles are sent to me from other journals for review, such as the Journal of Maternal Fetal Medicine, Journal of Pediatrics and others.

Q. Doctor, have you yourself published scholarly articles in the field of obstetrics and gynecology?

A. Yes, I have.

Q. Can you tell us how many?

A. I believe my curriculum vitae lists 140 articles.

Q. And how many of those were published in peer review journals?

A. One hundred of those are in peer reviewed journals.

Q. Doctor, are you familiar with the medical literature regarding abortion?

A. Yes, I am.

Q. How are you familiar with that literature?

A. Well, I am familiar with it in two or three capacities. I review the medical literature monthly to

select articles as I have described for our journal. And in doing so you come across a number of articles about abortion, which I scan read to see if there is interesting information in there, although I am not primarily the person on our editorial group that selects articles in that area.

[889]

I also read our current journals, two journals I mentioned for which I review. I both receive those monthly, and they include a number of articles about abortion.

From time to time I have been asked to comment on or testify about abortion, like I am here today. So I review articles about abortion when I do that. And I have done that in the past.

And I have also read the textbooks which are pertinent to the subject, such as textbook by Dr.—that is edited by Dr. Maureen Paul and David Grimes and their associates, and the textbook by Dr. Warren Hunter.

So that's, in general, how I have been familiar with the literature.

MR. QUINLIVAN: Your Honor, may I approach the witness?

THE COURT: Yes.

BY MR. QUINLIVAN:

Q. Doctor, I am handing you what has been marked as Plaintiff's exhibit 31. Is that the Paul Textbook to which you are referring?

A. Yes, it is.

Q. Do you own a copy of that textbook?

A. Yes, I do.

Q. Doctor, does the journal for which you serve as co-Editor-in-Chief publish articles on abortion?

[890]

A. Yes, it does.

MR. QUINLIVAN: Your honor, at this time I would move to qualify Dr. Bowes as an expert in the fields of obstetrics and gynecology, in the field of maternal fetal medicine and the medical literature regarding obstetrics and gynecology.

THE COURT: Any objection?

MS. KRASNOFF: No, Your Honor, as long as it's clear he's not being qualified as an expert in abortion practice.

THE COURT: I believe—

MR. QUINLIVAN: I did not move for that.

THE COURT: He will be accepted as an expert.

MR. QUINLIVAN: Thank you, your honor.

BY MR. QUINLIVAN:

Q. Doctor, are you familiar with the term "evidence-based medicine"?

A. Yes.

Q. Can you tell us or describe for us what that terms means?

A. "Evidence-based medicine" is the term that is applied to the concept of developing data and studies that support various practices of medicine and to ensure that new innovations in medicine, or even older

practices, are supported by sufficient data to confirm their efficacy and their safety.

Q. Doctor, in your experience has evidence-based medicine become accepted in the medical community?

* * * * *

[895]

A. Well, ultimately, studies or data that is collected in the interest of evidence-based medicine has to be disseminated to the medical community in some way. And it is through publication and peer-reviewed journals that that is done.

Q. Now, doctor, we have been mentioning several different types of studies that are used under the rubric of evidence-based medicine. Are these the types of studies that are done to test the development of new surgical procedures?

A. Yes.

Q. Are these the types of studies that are done in the field of obstetrics and gynecology?

A. Yes.

Q. Doctor, could you comment on what role, if any, intuition plays under the rubric of evidence-based medicine?

A. Well, intuition really relates to a physician or for an individual developing or suggesting how improvements can be made in treatments or in diagnosis and so forth.

You intuitively say: "This might improve the outcome in this particular disease." And that's the way these new techniques, operative procedures, medications are often developed, by intuitively using one's

experience and intuitively deciding how it might be done better.

Q. Doctor, do you have an opinion as to whether a physician's [896] intuitive judgment about a technique's safety, for example, is a reliable indicator of whether, in fact, that technique is safe?

A. It can't be the final arbiter of safety or efficacy. Once a new innovative procedure or medication or diagnostic technique is introduced it has to be subjected to more than a single intuitive recognition that this might be better. And that is where evidence-based medicine comes into play.

Q. And you just mentioned that an intuitive assessment has to be subjected to study. Can you just elaborate on that? Why is that your opinion?

A. Well, without such a study you may not recognize or you may not be able to ascertain how that particular intuitive knowledge will be—will apply to all situations. Let me give you—may I use an example of —in our own field of obstetrics and gynecology, it was intuitively—intuitively, we thought that doing a procedure called an "episiotomy" would be beneficial to pregnant women and their babies. Now, episiotomy is where the obstetrician makes an incision in the birth canal to allow more room for a baby to deliver. It was thought that would protect women from more severe lacerations or injury to the birth canal. For years, almost 30 or 40 years, it was routine, particularly in women having their first infant, to make this incision called an episiotomy, until finally this was subjected to a modern [897] Evidence day techniques and scrutiny. And a large—in fact, there have been several large randomized controlled trials, as I described them,

where women were asked to participate and agreed to either have an episiotomy performed when their baby was born or to have no episiotomy.

And lo and behold it turned out that having no episiotomy had a better outcome. Having an episiotomy led to more serious lacerations that resulted in things such as rectal incompetence.

And that was a rather astounding finding, but it showed that intuition was entirely misleading. And it took an elegant study to actually teach us otherwise. Now, episiotomies which were done almost routinely in the past are now done only in selected patients, and there are indications for it.

Q. Doctor, are you aware of any other examples in the field of obstetrics and gynecology where an intuitive judgment that a procedure was safe has been disproven after that procedure was subjected to study?

A. Yes, fetal heart rate monitoring would be an example. The study of breech delivery would be an example where these techniques initially were thought to be of great value and have certain efficacy and safety that was proven not to be true when subjected to a randomized controlled trial.

Q. Doctor, now, going back a little bit, I think you mentioned * * *.

* * * * *

[908]

Q. Doctor, do you have an opinion as to whether these case series establish the comparative safety of the intact D&X procedure as compared to the disarticulation D&E procedure?

A. Yes.

Q. What is your opinion?

A. My opinion is that these do not establish the relative safety of these procedures.

Q. Can you just elaborate on your opinion a little more?

A. Well, simply because they are not compared to anything, they are not compared to a comparable group of patients in the—so you don't know whether they are a greater safety, lesser safety, less efficacy, greater efficacy unless you have a comparison group. Now, in one case, I believe Dr. McMahan or Dr. Haskell said related to other procedures as reported in the literature, but you actually have to go beyond that because those were quite different settings, quite different populations of patients, so you don't really have the kind of comparison you would want in an epidemiologically sound retrospective study.

Q. Now, doctor, we have been talking about the absence of published peer-reviewed studies comparing the safety of the intact D&X procedure with the disarticulation D&E. During the course of this case have you become aware of any unpublished studies that compare the safety of the intact D&X procedure * * *.

* * * * *

[912]

Q. Doctor, turning your attention to the fourth page, or page 4 of the Chasen Study.

A. I have it.

Q. Left-hand column in the middle of the page, the paragraph beginning, "Our approach." And it reads:

"Our approach in performing intact dilation and extraction whenever possible is intended to minimize the use of forceps in extracting the fetus. We believe that the use of forceps to grasp the fetus can cause inadvertent trauma to the uterine wall at these gestational ages evacuation of a fetus can require multiple insertions of forceps and intact dilation and extraction avoids this."

Do you see those sentences, doctor?

A. Yes, I do.

Q. Doctor, does the data recorded by the authors of the Chasen Study support the safety advantages that are set forth in that paragraph?

A. No, it doesn't.

Q. Doctor, you testified that having reviewed the expert reports submitted by the experts in this case and in the Nebraska and New York cases you're aware of a claim being made that the intact D&X procedure offers safety advantages over the D&E procedure because it results in a shorter procedure; is * * *.

* * * * *

[919] seen? And that gets to the point of: did they overlook complications that weren't included in the data itself?

In other words, a patient may have had a complication and went to another hospital or another facility for treatment, so we don't know how well they followed up those patients. Perhaps they got all of them, but you should say something about that.

Q. You just mentioned the follow-up for surgical procedures. Any—outside the your concern about or limitation of describing the follow-up for surgical procedures, are there any other methodological limitations?

A. Well, on which the authors readily admitted was in their follow-up of patients who had subsequent pregnancies—first of all, there were very few pregnancies. And they admitted that not all of those patients came back to their facility for obstetrical care. And they used only their own medical records.

So we don't know how many other patients had pregnancies, and had pregnancies—or what the outcomes of those were. So they are basing their conclusion that there was no difference in premature birth on a far too small proportion of the patients that actually had the abortion procedures and those with inadequate follow-up.

So I think they—that was not justified to make that conclusion.

* * * * *

[922]

A. Well, he may have disclosed it, but it is not disclosed—it's not disclosed in the final proof. This would be the article that the readers would see. The readers would have no idea of his involvement.

Q. Doctor, I believe you testified—and I am going back again, having read the expert reports of the plaintiffs in this case and in the Nebraska and New York cases—that you're aware of the claimed safety advantages of the intact D&X procedure as compared to the D&E procedure, and that those alleged safety

advantages include the fewer number of passes into the uterus, the shorter procedure time and less blood loss, and the less risk that a part of the fetus will remain in the uterus.

Do you have an opinion about the validity of those claims from an evidence-based medicine perspective?

A. Yes.

Q. What is that opinion?

A. I don't think those claims have been established with good medical evidence as of now.

Q. Doctor, do you think—do you have an opinion as to whether it would be feasible to construct a study comparing the intact D&X procedure with a D&E procedure?

A. I think it would be feasible.

Q. What kind of studies could be done?

A. Although they are not easy to do in this setting, you could * * *.

* * * * *

[WATSON BOWES, JR., M.D.—CROSS EXAMINATION]

[943]

* * * * *

I would like to start, Dr. Bowes, by talking to you about how a physician chooses the appropriate abortion method for his or her own patient.

You would agree, doctor, that in starting an abortion procedure, whether it be an induction, a D&E, an intact D&E or some other procedure, that the

physician's intent is to end the pregnancy in the way safest for the woman, wouldn't you?

A. Yes.

Q. And you would agree that the safest and most appropriate abortion procedure for a particular woman depends, in part, on the gestational age of the pregnancy?

A. Yes.

Q. And you would agree, also, that the safest and most appropriate abortion procedure for a particular woman depends, in part, on her underlying health?

A. Yes.

Q. And you would also agree that the safest and most appropriate abortion procedure for any individual woman would depend, in part, on any medical contraindication that she might have?

A. Yes.

[944]

Q. And you would agree that the safest and most appropriate abortion procedure for a particular woman depends, in part, on her prior surgical history, if any?

A. Yes.

Q. And you would agree the safest and most appropriate abortion procedure for a particular woman depends, in part, on the training, skill and experience of her physician?

A. Yes.

Q. And you would agree, also, that the safest and most appropriate abortion procedure for any particular woman depends, in part, on whether she or her doctor

desires to remove the fetus intact to permit complete pathological testing.

A. Yes.

Q. And you would agree that with respect to a medical emergency exception to an abortion restriction a physician should be permitted to rely on his or her own best medical judgment to determine if there is such an emergency?

A. Yes.

Q. Now, I would like to switch a little bit and talk to you specifically about D&E abortions. Would you agree with me in a D&E if removal of the fetus can be accomplished with fewer rather than more instrumental passes that that would be helpful?

A. Intuitively, yes, I would agree with that.

[945]

Q. And would you also agree that when a physician performs a D&E he or she is trying to do so with as little trauma and blood loss as possible for the woman; is that right?

A. Yes, I would agree.

Q. And he or she tries within the bounds of safety to complete the procedure as quickly as possible; is that correct?

A. Yes.

Q. And would you agree the physician tries to insert the forceps into the uterus as few times as possible in order to complete the procedure?

A. Yes.

Q. And I think that you alluded to this in your prior answer, but you would agree intuitively, even if not conclusively, that a technique that reduces the number of insertions of instruments into the uterus might offer some safety advantages?

A. Yes.

Q. And you agree during the course of a D&E it might happen on some occasion that the physician is able to extract the fetus up to the calvarium with one pass of instruments into the uterus?

A. Yes.

Q. Do you agree that the risks of D&E increase as gestational age advances?

A. Yes. I think there is evidence that it does.

Q. And if you had two large groups of women having D&E's, one [946] group having them at 20 weeks and one who was having them at 22 weeks, would you expect to see more complications in the 22 Week group?

A. Intuitively, yes, you would.

Q. You agree, don't you, that overall D&E is a safer procedure than induction?

A. I believe it's been established that it is.

Q. And that's part based on the data of the Centers for Disease Control?

A. Yes.

Q. And it's also, in part, based on the research of Dr. Grimes?

A. Yes.

Q. And I think you have testified to this, but you know Dr. Grimes well, don't you?

A. I do.

Q. And he is on the faculty at your institution; is that correct?

A. Yes, that's correct.

Q. And he's a well-respected practitioner, isn't he?

A. Yes, he is.

Q. And he's also a very competent researcher?

A. Yes, he is.

Q. And I think you also alluded to this on your direct, but you agree that there is evidence that women prefer D&E to [947] induction abortions because D&E abortions do not require the women to be in labor; is that correct?

A. Generally, that is correct, yes.

Q. And you would agree that there are certain contraindications for induction in the second-trimester of pregnancy?

A. Yes.

Q. And one of those would be a classical uterine scar or a myomectomy? A scar from a myomectomy.

A. A scar from a myomectomy, yes, ma'am.

Q. And a myomectomy is surgery to remove uterine fibroids; is that correct?

A. Yes, that's correct.

Q. And do you believe that retained placenta is a complication of induced abortion?

A. Yes.

Q. I am sorry. And that is specifically of induction abortions. I misspoke. It's a complication of induction abortions?

A. Yes.

Q. And would you agree that on rare occasions induction abortions may not always be successful?

A. On rare occasion, yes.

Q. And on those rare occasions, if it is not successful, the physician may have to perform a separate surgical procedure in [948] order to complete the abortion; is that correct?

A. That's correct.

Q. And would you agree that at 20 or 21 weeks the uterus usually doesn't contract spontaneously, or if it does, the contractions are sporadic and don't cause cervical dilation?

A. In general, that is correct, yes.

Q. And would you agree that the drugs used in induction abortion to cause uterine contractions override that process?

A. Yes, they do.

* * * * *

[957]

* * * * *

Q. Sure. Would you agree that some prospective trials the purpose is to look at a specific intervention or treatment in the general population?

A. Yes.

Q. And those are often a first step in establishing the safety of an intervention or treatment; is that correct?

A. Now, if you mean by "prospective trial" the randomized trial that I have described?

Q. Yes.

A. And if you mean by "general population" the population of individuals that have the condition or treatment, yes.

Q. Yes.

And isn't it the case if a potential participant in one of those trials has a very serious health condition which is unrelated to what is being studied, that he or she might be excluded from the study?

A. Yes.

Q. In fact, I don't know if you remember, but in the Lancet study we were just talking about, multiple gestations were excluded; is that correct? And women with a gestational age less than 37 weeks were excluded; is that correct?

A. Yes.

Q. And if the fetus was judged to be clinically large or to have an estimated fetal weight of 400 grams or more they were [958] excluded?

A. Yes.

Q. And if there was a fetal anomaly or condition that might cause a mechanical problem at delivery, such as hydrocephalus they were excluded?

A. I am aware of that, yes.

Q. And that is typical in general safety studies to exclude people with conditions?

A. Yes.

Q. That are unrelated to the treatment, correct? Yes?

A. Yes.

Q. So is it fair, then, to say that a prospective randomized trial such as that would not tell you how the treatment or intervention being studied would be tolerated by a person with one of those medical conditions that is not the subject of the study?

A. If in constructing the study you eliminated certain patients, indeed, the study would not apply—the results of the study would not apply to those patients who had been excluded.

Q. And even then if the study showed that that treatment or intervention had certain advantages in the general population, it might be the case that people with a certain serious underlying medical condition should not have that treatment; isn't that true?

[959]

A. That's true.

Q. And by the same token, if that sort of trial demonstrated a treatment or intervention did not benefit the general population, it still might be better for any specific patient with a specific health condition; isn't that right?

A. I think that is right. There are a lot of conditions there.

Q. Do you want me to repeat it?

A. No, ma'am. I think I understand it.

Q. You offered some testimony about the safety advantages or whether or not there were safety advantages about D&E abortions where the fetus is removed intact up to the calvarium. Have you ever personally observed or supervised a D&E where the fetus was removed intact up to the calvarium?

A. No, ma'am.

Q. And you've never spoken to any physician who performs intact D&E's about those abortions, have you?

A. No.

Q. And the only materials you reviewed to prepare your original expert report were Dr. Paul's textbook, the Haskell paper that you were just looking at, and another nonpublished paper; is that correct?

A. As relates to the abortion aspects. I reviewed other things because the questions went beyond that to such things as the incidence of neonatal death after late gestational age.

[960]

Q. Those were the only materials that related to removal of a fetus intact during a D&E; is that correct?

A. Yes.

Q. And despite that you have Dr. Grimes, who is an expert on induced abortion at UNC, you haven't spoken to him about his opinions about intact D&E, have you?

A. No, I have not.

Q. You actually haven't spoken to him about his opinions about D&E abortions, either, have you?

A. I don't think I have spoken to him directly. I happen to know his literature well, and he's written extensively about it, so I think I have some idea about what his impressions are.

Q. Would you agree with me, Doctor, though, that there is a body of medical opinion which consists of responsible group of physicians that hold the opinion that intact removal of a fetus during a surgical abortion may be the safest procedure for some women in some circumstances?

A. Yes.

Q. And you would agree that there is no consensus in the medical community that removal of the fetus during a D&E is never medically necessary; is that right?

A. That's correct.

Q. And you've offered some criticisms of Dr. Chasen's study today, but it is not your view that his study is of no use, is it?

[961]

A. No, that is not my view.

Q. Indeed, you believe that his study would help a physician design a prospective randomized trial; isn't that right?

A. Yes.

Q. And would you agree with me that a study like Dr. Chasen's is often the first step in the process towards a randomized controlled trial?

A. I would agree with that.

Q. And leaving Dr. Chasen's study aside, you believe that a very credible, respective cohort study could be conducted comparing D&E where the fetus is removed intact to where the fetus is removed in a D&E by disarticulation?

A. Yes, I believe that.

Q. And that study would be very similar to Dr. Chasen's, right?

A. Yes.

Q. And you believe that a properly conducted study such as that is a valid and acceptable basis on which a particular procedure could become widely used in the population, don't you?

A. I do.

Q. And I am correct, aren't I, that you can't properly conduct a retrospective case controlled study until the technique has been used in an appropriately large number of cases?

[962]

Q. And in order to conduct that study, some passage of time must occur after the technique is introduced so that a sufficient number of those cases have occurred; isn't that correct?

A. That's correct.

Q. And that period of time could be years; is that right?

A. Yes.

Q. And the period of time would depend on the facts and circumstances of the actual technique that is involved in the study; isn't that correct?

A. That's correct.

Q. And you agree that if a procedure is outlawed before it has been performed that number of times, then such a study could never be conducted; isn't that right?

A. Well, it couldn't be conducted in areas where the procedure was outlawed.

Q. And do you want to explain what you mean by that?

A. Well, in another setting you might be able to perform a study of these two procedures where the procedure had not been outlawed.

Q. If it was outlawed in the United States, would the only way to study it would be to do it in another country?

A. Yes, or alter the procedure in some way so you modify the procedure so it would not—it would not violate the law, if there was a law, although you would not be studying the [963] original procedure on a live baby. You would not be actually doing a study on abortions of live infants. Live fetuses. Excuse me. Live fetuses.

Q. And is the reference to a "live fetus" something about the law at issue in this case?

A. Yes, I believe it is.

Q. And can you explain what you mean by modifying so you don't have a live baby?

A. Well, there are certain abortion procedures in which physicians inject medications that intentionally kill the fetus prior to an abortion procedure. So that you now have a fetal death.

And it is my understanding that these restrictions do not apply to situations in which the fetus is not alive, is dead.

Q. Okay. I would like to ask you some questions about the injection of the chemical agent that you have referenced.

In the few D&E abortions that you have performed since your residency where the fetus was alive at the outset, you didn't inject either potassium chloride into the fetal heart or digoxin into the amniotic sac to cause fetal demise before you began the procedure, did you?

A. No, I did not.

Q. And you agree that there is no medical benefit to the woman from injecting those substances in order to cause fetal demise; [964] Isn't that correct?

A. I agree with that.

Q. In fact, you would agree that there are risks to the woman even if those risks are very small associated with those injections?

A. Yes, I agree.

Q. And that there is no medical reason to subject the woman to those risks?

A. That's correct.

Q. And you would agree that those indications can't be given to all women in all situations; is that correct?

A. Those medications?

Q. Yes.

A. I agree with it, yes.

Q. For example, it would be more difficult to use those injections on a morbidly obese woman; isn't that right?

A. That's correct.

Q. Speaking specifically about injections of potassium chloride into the fetal heart, you would agree, would you not, that all physicians do not have the skill to perform that injection?

A. I agree with that.

Q. In fact, when you prepared your expert report, counsel for the defendant asked you to state in that report that it is easy to administer potassium chloride into a fetal heart and you [965] felt that was not an appropriate statement; is that correct?

A. Correct.

* * * * *

[967]

* * * * *

Dr. Bowes, was a draft of your expert report prepared by counsel for the defendant in this case?

A. Yes, it was.

Q. And did that draft include the phrase that it is easy to administer potassium chloride into a fetal heart?

[968]

A. Yes.

Q. And did you remove that from your expert report?

A. Yes.

Q. And was the reason that you removed that is because you didn't think it is appropriate?

A. Yes. I don't think it is easy.

Q. In fact, you believe that one needs expertise to administer potassium chloride into a fetal heart; is that correct?

A. Yes, I do.

Q. You yourself have never done that?

A. That's correct.

Q. Nor have you taught your students to do it?

A. That's correct.

Q. And at the University of North Carolina, potassium chloride injections are given only by maternal fetal medicine specialists and not by the attending ob/gyn; isn't that right?

A. That's correct.

Q. Turning to digoxin, you have never personally used or observed digoxin being used to cause fetal demise, have you?

A. I have not.

Q. And you would imagine, wouldn't you, that in a woman with severe heart disease you might want to avoid the use of digoxin; isn't that true?

A. Yes.

Q. And you agree that nausea and vomiting are known side [969] effects of digoxin?

A. I am aware of that.

Q. And you agree that all things being equal, the physician would like to avoid those sort of unpleasant side effects when possible?

A. Yes.

Q. And before we moved to this topic we were still talking about how you could perform a retrospective case controlled study.

And would you agree with me that as long as there isn't a high rate of complications from a new technique or variation of a technique that until there is a sufficient number of times in which it has been performed, such that it can be properly studied, it is appropriate to leave its usage to the informed judgment of responsible physicians?

A. Yes.

Q. Your primary criticism of Dr. Chasen's study is that it doesn't have sufficient patients, and therefore it doesn't have the power to prove that there is no difference between the D&E with disarticulation versus the intact D&E group; is that correct?

A. That's correct.

Q. But you yourself haven't figured out how many D&E's where the fetus was removed intact versus where the fetus was dismembered you would need in order for to you consider it [970] reliable, have you?

A. I have not done what is called a formal power analysis to know precisely how many patients would be required.

Q. Would you agree that an epidemiologist might be more of an expert in assessing the number of patients needed in order to make that kind of study reliable?

A. A biostatistician would conduct that kind of—conduct that kind of analysis.

Q. And he or she would have more expertise than you in doing that?

A. That's correct.

Q. Would you agree that if a retrospective study is published in a well-respected peer reviewed journal that the process of peer review at least provides some assurance that the study had been responsibly and reliably conducted?

A. Some assurance.

Q. That is one of the purposes of peer review, is it not?

A. Yes, it is.

Q. Another criticism that you have with dr. chasen's study is that you believe there was insufficient follow-up with the patients; is that right?

A. I believe that the follow-up was not adequately described. I don't know how—you just don't know about it.

Q. Might follow-up with patients be a problem in many retrospective studies?

[971]

A. Yes.

Q. And that wouldn't necessarily be unique to Dr. Chasen's study?

A. No.

Q. I believe the opinion that you're expressing today is that Dr. Chasen's study doesn't demonstrate

the superiority of D&E where the fetus is removed intact versus where it is dismembered; is that correct?

A. Yes, that's correct.

Q. But you would agree, would you not, that Dr. Chasen's study certainly does not suggest that D&E where the fetus is removed intact is any less safe than where the D&E is disarticulated?

A. I am aware of that.

Q. And you are not aware of any evidence-based medicine that establishes that the removal of the fetus intact during the D&E is less safe than a D&E with disarticulation, are you?

A. I am not aware of any.

Q. And you are not aware of any study that establishes that removal of the fetus intact during a D&E is any less safe than an induction abortion, are you?

A. I don't know of any study that has compared those.

Q. You would not say that a hysterotomy in all but very rare circumstances would be preferable to a D&E where the fetus is removed intact, would you?

A. Could you repeat that, please?

[972]

Q. Sure. You wouldn't say that a hysterotomy in all but a very rare circumstance would be preferable to doing a D&E where the fetus is removed intact, would you?

A. I would not say that. I mean, I think I agree with what you just said.

Q. You would agree that in most cases an intact D&E would be preferable to a hysterotomy?

A. Yes.

Q. And you agree there is no reliable medical basis upon which to say that intact removal of a fetus during a D&E is any more dangerous to a woman than any other abortion method; isn't that right?

A. I believe that data is not available.

Q. So in some ways—if I am mischaracterizing your testimony, please correct me—the bottom line of your opinion is really that there's no evidence-based medicine that you deem reliable either way about the safety of D&E where the fetus is removed intact; is that right?

A. That's correct.

* * * * *

[974]

* * * * *

Q. I would like to talk to you about the findings of the Partial-Birth Abortion Ban Act.

MS. KRASNOFF: May I approach the witness?

THE COURT: Yes.

BY MS. KRASNOFF:

Q. This is Plaintiff's Exhibit 1. Dr. Bowes, if you would take a look at Dinding Number 2, which is on the first page of this document. Do you see that?

A. Yes, ma'am.

Q. That finding states, quote:

[975]

"Partial-birth abortion remains a disfavored procedure that is not only unnecessary to preserve the health of the mother, but, in fact, poses serious risks to the long-term health of women, and in some circumstances their lives," unquote.

You don't agree with that finding, do you?

A. I don't. I do not.

Q. And, in fact, no valid scientific evidence supports that finding, does it, Dr. Bowes?

A. Not in my view.

Q. If you could turn to page 4, which is marked S3-4. And you can read finding 14(A) to yourself. That is quite long. If you could let me know when you have finished.

A. I have read it.

Q. And, Dr. Bowes, there is no reliable scientific evidence that demonstrates that partial-birth abortion poses any of the risks enumerated in that finding on a more serious or frequent basis than any other abortion procedure, is there?

A. Not that I know of.

Q. And if you could flip the page to page 5 and take a look at finding 14(F). Do you see that? It actually just says "F" because the "14" is on the previous page.

A. Okay.

Q. That states, quote:

[976]

"A ban on the partial-birth abortion procedure will therefore advance the health interests of pregnant women seeking to terminate a pregnancy."

In your opinion, Dr. Bowes, there is no valid, reliable scientific evidence that supports that statement, is there?

A. I believe there is not.

Q. And, in fact, your support for the partial-birth abortion ban act of 2003 is not based on any concerns for protecting maternal health, is it?

A. No, I don't think those have been established.

Q. Rather, your support for the Act is based on your ethical opposition to abortion in general and particularly to intact D&E being performed post-viability other than to save the life of the woman; is that correct?

A. That's correct.

Q. And your ethical opposition to abortion procedures pre-viability is not in any way particular to the intact D&E procedure as opposed to other methods of abortion; is that correct?

A. That's correct.

Q. And you would support a ban on all abortions as long as it contained an exception for when the woman's life was at risk, would you not?

A. Yes, I would.

[977]

Q. And isn't it true you would not perform an abortion to save the life of one of your patients unless

you were satisfied that the likelihood that she would die is more than 50 percent?

A. Yes.

Q. Would you agree with me that in any given case other physicians might disagree about that percentage or what the likelihood is that a woman might die?

A. Yes.

Q. And you would favor a ban on abortions even in cases where the pregnancy was the result of rape and incest; isn't that right?

A. I have stated that, yes.

Q. I want to clarify one thing from your direct testimony, which is that you stated that the term "partial-birth abortion" appeared in the new England Journal of Medicine. Am I correct that that was in a letter that was written?

A. No.

Q. It was—was it in an article that was peer reviewed?

A. Well, it was an—the article I am recalling was not a study, that is a scientific study. It was a description of the procedure and the implications of the legislation, and so forth, that was being described.

But it was—in fact, I think the title of it was "Partial-birth abortion."

Q. And—

[978]

A. So those types of articles are not subject to peer review. These are decisions made by the editors to—but not necessarily subjected—the manuscript has not

been subjected to peer review. These are commentaries.

Q. So just to be clear, this was not subjected to peer review; is that correct?

A. That's correct.

Q. Going over some of your experience with abortion procedures, your only formal training in abortion techniques was during your residency which was between 1962 and 1965; is that right?

A. That's correct.

Q. And the only second trimester abortion method that you received training in during your residency was the induction method; is that correct?

A. Yes.

Q. And you were not trained in the dilation and evacuation or D&E procedure during your residency; is that right?

A. That's correct.

Q. And that's because D&E wasn't being performed in Colorado in the 60's, right?

A. That's correct.

Q. And you haven't received any formal training on abortion techniques or procedures since being 1965; is that right?

A. That's correct.

[979]

Q. And in the close to 40 years since you completed your residency you have only participated in between four to six to 10—fewer than 10—second-trimester

abortions where the fetus was alive at the beginning of the procedure; is that correct?

A. That's correct.

Q. And you yourself did not perform these abortions; is that correct?

A. No, I was supervising the abortion with the resident.

Q. So you supervised them, right?

A. Yes.

Q. And in none of these five to 10 induced abortions that you supervised did the fetus have a gestational age that was greater than 20 weeks LMP; is that right?

A. I believe that's correct, yes.

Q. And you testified on direct that of the 10, only two or three were actually by the D&E method; is that right?

A. That's correct.

Q. The remaining seven or eight were by induction?

A. Yes.

Q. Given the fact that you haven't performed any yourself and have supervised two or three D&E's on fetuses that have not naturally demised, would you experience your experience in D&E's on a live fetus is quite limited?

A. I would agree.

[980]

Q. I forgot to ask you this, but you have never personally observed or supervised a D&E where the

fetal was removed from the uterus intact up to the calvarium?

A. I have not.

Q. And you testified you've been involved in the performance of 150 second-trimester abortions on fetuses that have already demised before the procedure had begun; is that correct?

A. Yes. Those aren't technically called "abortions," but they are pregnancy terminations in the situation of fetal death.

Q. Those 150 were over a 40-year period; is that right?

A. Yes.

Q. And most of those were done by induction; is that right?

A. Yes.

Q. In fact, approximately one or two per year that were done using the D&E method; is that right?

A. That's correct.

Q. And in the one—in the two D&E's per year that you were involved in, the resident was actually performing the procedure and you were supervising; is that right?

A. That's correct.

Q. And sometimes in these situations of fetal death, the fetus would have been dead for hours before the procedure began; is that right?

A. Yes.

Q. And sometimes the fetus had been dead for a day or more [981] before the procedure began; is that correct?

A. Yes.

Q. And the passage of time after demise changes the nature of the fetal tissue; does it not?

A. Yes, it does.

Q. And am I correct that that process is called "maceration"?

A. Yes.

Q. And you would agree that following a fetal death the composition and consistency of the fetal body is different than it was than when an abortion was begun on a living fetus; would you not?

A. Yes.

Q. And you agree that there are some differences in the case of fetal demise in an induction abortion compared to when the fetus is living at the outset; is that right?

A. Could you restate that? I am not—I want to be sure I understand that question.

Q. Sure. Are there any differences in an induction abortion between when it is—in your experience—between when it is done on a living fetus and when it is done on a fetus that has been demised for a day or two?

A. I am not sure that that is true or not. I don't know that that really has been studied. In my experience, the labor is pretty much the same in both of those situations.

Q. In your experience the uterus is equally responsive [982] whether—to the inducing agents, whether the fetus is alive or not?

A. In my experience, yes.

Q. And you've never taught abortion didactically, have you?

A. Not by "didactically" if you mean in lecture and some such things, no. I have taught abortion procedures to and the techniques for performing the various things that we have described to residents in clinical settings, if that is what you mean. If I can qualify that by you what mean by "didactic."

Q. That's fine. You testified that you sit on an institutional review board at the University of North Carolina. None of the research projects that have come before you as a member of the Institutional Review Board have involved abortion, have they?

A. Not that I recall, no.

Q. You have not authored any articles about abortion procedure, have you?

A. No, I have not.

Q. And you haven't conducted any peer review for any journal with respect to any articles about abortion procedure, have you?

A. No.

Q. And you have not participated in, conducted or been otherwise involved in any studies of any method of abortion [983] procedure, have you?

A. I have not.

Q. And you retired from the practice of medicine in 1999, I believe you said?

A. I did.

Q. And I assume I'm correct that would mean you haven't performed any abortions on demised fetuses, or otherwise, since that time; is that correct?

A. That's correct.

Q. Dr. Bowes, is it not true that when you were first asked in your deposition if you considered yourself to be an expert on abortion or abortion technique that you responded "no"?

A. That I responded "no" when I was first asked?

Q. Yes.

A. I don't recall exactly what I said, but I am not an expert on abortion techniques.

Q. And you also agree you are not an expert on induced abortion at all; is that right?

A. I am not considered an expert on induced abortion.

Q. And you would agree that someone who has more experience performing induced abortions than you do would have greater expertise in that area, do you not?

A. Yes.

Q. And, Dr. Bowes, this is not the first case regarding an abortion restriction in which you have offered an opinion in [984] favor of that restriction, is it?

A. No, this is not the first case.

Q. In fact, you have many times been an advocate for other restrictions and prohibitions on abortions; is that correct?

A. Several times.

Q. You've offered some sort of sworn testimony in six different cases where a state had banned what they called "Partial-birth abortion"; is that not correct?

A. Yes, that's correct.

Q. And you've testified uniformly in support of those bans, have you not?

A. Yes.

Q. And, in particular, you offered testimony in support of Rhode Island's ban on partial-birth abortion?

A. Yes.

Q. And Wisconsin's?

A. Yes.

Q. And West Virginia's?

A. Yes, ma'am.

Q. And New Jersey's?

A. Yes.

Q. And Virginia?

A. Yes.

Q. And last one, Montana; is that correct?

A. Yes.

[985]

Q. And in each of those six cases you opined that the ban did not pose a threat to the women's health; did you not?

A. Yes.

Q. And you also find that the ban did not reach either D&E or induction abortions in either of those cases, did you not?

A. Yes.

Q. Now, you testified on direct that you sent a letter to Representative Canady in 1995 expressing your support for a previous version of the federal Partial-Birth Abortion Ban Act; is that correct?

MR. QUINLIVAN: Objection. Mischaracterizes his testimony.

THE COURT: I will allow the question. He can clarify.

THE WITNESS: My letter to Doctor—excuse me—to representative Canady was in response to specific questions about assertions that had been made regarding the Act. So I—if I recall my letter correctly, it was only responding to those several questions. Such things as neonatal survival at various gestational ages, assertions that all the fetuses were dead that had received analgesia the mother—analgesia given to the mother always kills the fetus, and such things as that.

I simply responded to that.

BY MS. KRASNOFF:

Q. And was your letter in 2003 in support of the current [986] version of the ban to Senator Santorum, was that also simply responding to questions that were asked of you?

A. Yes. I think Senator Santorum, the question related to assertions made by Dr. Philip Darney about this procedure.

Q. But no one in Congress sought your opinion on whether you thought the findings in the bill were accurate or not, did they?

A. No, they did not.

Q. If they had would, you have told them what you told us here today, that they were not accurate?

A. Yes.

* * * * *

UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

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No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC. AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

*v.*

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, DEFENDANT

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**TRANSCRIPT OF PROCEEDINGS**
Apr. 9, 2004
Volume 7

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BEFORE THE HONORABLE
PHYLLIS J. HAMILTON, JUDGE

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APPEARANCES:

FOR PLAINTIFFS:

BINGHAM MCCUTCHEON LLP
Three Embarcadero Center
San Francisco, California 94111-4003

By: BETH H. PARKER, Attorney at Law
DEBORAH ADLER, Esquire

Planned Parenthood Federation of America
434 W. 33rd Street
New York, New York 10001

By: EVE C. GARTNER, Esquire

Planned Parenthood Federation of America
1780 Massachusetts Avenue, N.W.
Washington, D.C. 200036

By: HELENE T. KRASNOFF, Esquire

FOR INTERVENOR:

Office of the City Attorney
1390 Market Street, Suite 1008
San Francisco, California 94102

By: KATHLEEN SUZANNE MORRIS
ALEETA MARIE VAN RUNKLE
Deputy City Attorneys

FOR DEFENDANT:

U.S. Department of Justice
20 Massachusetts Avenue, N.W. Room 7128
Washington, D.C. 20530

By: MARK THOMAS QUINLIVAN
W. SCOTT SIMPSON,
KAIJA MARIE CLARK,
Assistant U.S. Attorneys

* * * * *

[L. LEROY SPRANG, M.D. - DIRECT EXAMINATION]

[1000]

THE WITNESS: I do.

THE CLERK: Take the stand.

THE WITNESS: Thank you.

THE COURT: Good morning.

THE CLERK: Please state your name for the court.

THE WITNESS: M. Leroy Sprang. L-E capital R-O-Y, S-P-R-A-N-G.

BY MR. SIMPSON:

Q. Dr. Sprang, how are you this morning?

A. Well, thank you.

Q. What is your medical specialty, doctor?

A. I am a board certified in obstetrics and gynecology.

THE COURT REPORTER: Is the microphone on?

THE CLERK: Yes.

THE COURT: Your voice is—

THE WITNESS: I have a very soft voice. If this doesn't work—

THE COURT: Well, it is on. It doesn't amplify very loudly. I will ask you to sit close to it. That's fine.

BY MR. SIMPSON:

Q. Doctor, you said you are board certified in obstetrics and gynecology?

A. Correct.

Q. Briefly, doctor, could you tell us what your actual medical [1001] practice consists of?

A. I have a full-time private academic practice at Evanston Northwestern Healthcare. I provide—can you hear me? Barely?

THE COURT REPORTER: Barely. You provide?

THE WITNESS: I provide full gynecologic services. I've delivered 3,000 patients, and done numerous surgical procedures.

BY MR. SIMPSON:

Q. So do you do a full range of obstetrics and gynecology?

A. I do a full range of obstetrics and gynecology, yes.

Q. You mentioned practicing at Evanston Northwestern Healthcare is that a hospital?

A. It is actually a hospital system. We have three hospitals, and it has a large geographic area with 1800 physicians on staff.

Q. Where is Evanston, doctor?

A. Evanston is a suburb directly north of Chicago.

Q. For how many years have you been practicing obstetrics and gynecology?

A. I have been in private practice for 28 years, and actually started training in obstetrics and gynecology in 1968.

Q. Doctor, have you held any faculty positions in medicine?

A. I am currently an associate clinical professor at Pritzker School of Medicine, Northwestern University. I have held other [1002] positions. I have been chairman of the division of obstetrics and gynecology for the National Center for Continuing Medical Education.

Q. Doctor, how long have you been associate clinical professor?

A. I have gone through—well, I will say about the last five years I was an assistant professor before that and instructor before that, so I have gone through each of the steps for a full professor.

Q. So when did you start your teaching?

A. I started teaching as a resident and started teaching medical students probably in 1972.

Q. And you said you're an associate clinical professor at Northwestern University?

A. Correct, Northwestern University has two major teaching hospitals, one downtown, Prentice Hospital, and the other in Evanston called Evanston Northwestern Healthcare.

Q. What do you teach at Northwestern, Doctor?

A. I have medical students and residents with me on a continuous basis, both in the office and in the hospital. So I am teaching the daily practice of obstetrics and gynecology. I teach surgical techniques, the full range of obstetric and obstetric practices.

Q. And I you mentioned the division of continuing —how did you say that?

[1003]

A. The division of continuing medical education. I— from about 1980, '81 to about 1997, I was chairman of the division of obstetrics and gynecology in a postgraduate continuing education course. I was putting on three to five actual postgraduate courses annually with hundreds of physicians from all over the United States and the world attending these classes.

And I was in charge of putting on the programs, picking both the topics and the speakers for about a 20-year period of time.

Q. Doctor, have you been an officer in any statewide medical organization?

A. Yes. Directly out of residency I became involved and also professional organizations both for the benefit

of our patients and our profession. I have gone through both in the department level each authorship, including President of Professional Staff at Evanston Hospital. I had authorships and chairmanships of the Illinois Medical Society and have been Chairman of the Board and President of the Chicago Medical Society. And I've had authorships and Chairman of the Board and President of the Illinois State Medical Society.

And I am a delegate from Illinois to the American Medical Association. And I am currently Chairman of the Illinois Delegation to the American Medical Association, and most recently Chairman of the Great Lakes States Coalition, |1004| which represents seven states to the American Medical Association.

Q. Doctor, when did you serve as President of the Illinois State Medical Society?

A. President in 2000, 2001; Chairman of the Board from 1996 to '98.

Q. Doctor, are you a member of any nationwide medical organizations?

A. I'm a fellow of the American College of Obstetricians and Gynecologists; have served in various formations and functions there. And currently interact with the American College of OB/GYNE delegation to the AMA. As being Chairman of the Illinois OB/GYNE we frequently will come together on issues related to women's health care and work together on those issues.

Q. When you say "OB/GYNE" do you mean obstetrician and gynecologists?

A. Yes. I can say that each time or I can say "OB/GYNE," whichever the court prefers.

THE COURT: "OB/GYNE" is fine.

THE WITNESS: It is just shorter.

BY MR. SIMPSON:

Q. Doctor, are you also—and you said you are a fellow—maybe I should go back. The American College of Obstetrics and Gynecologists, is that also known by the acronym ACOG?

[1005]

A. Correct.

Q. Are you a fellow of ACOG?

A. I am a fellow of ACOG.

Q. Are you also a fellow of the American College of Surgeons?

A. I am also a fellow of the American College of Surgeons.

Q. Doctor, is it your understanding that the majority of OB/GYN's are not fellows of the American College of Surgeons?

A. That is correct. It is a separate organization where you have to stand before a separate committee in order to be approved as a fellow of that organization, as well.

Q. Doctor, do you do any work in relation to medical liability insurance?

A. I also sit on the board of the largest liability insurance carrier in Illinois and actually have chaired that board, as well. We ensure 14,000 physicians in the state of Illinois. And we have practicing a thousand obstetricians and gynecologists, as a result review all of the liability cases in Illinois on a monthly basis in relation to those 14,000 physicians.

Q. Doctor, I believe you said that you are a delegate to the American Medical Association?

A. I am a delegate, have been a delegate for sometime, and now I chair the delegation. So I speak for the delegation at the AMA House of Delegates.

Q. Have you served on any committees of the AMA?

[1006]

A. I have served on several committees of the AMA. I have served on reference committees before the house on several occasions. I have served on different select committees that they have picked. I currently serve on the committee that selects the public member of the Board of Trustees of the AMA.

And I have recently—was selected for a special task force that they created to review intact D&X, and present that report back to the delegation, back to the House of Delegates.

Q. Can you tell us a little more, Doctor, about your service on that special committee regarding intact D&X? For example, how many physicians served on that committee?

A. There were a total of 10 physicians on that committee, nine appointed and the chairman of the committee was the chairman of the AMA Board of Trustees.

Q. So how were you chosen for that committee?

A. Resolutions were introduced to the interim meeting of the AMA in December of '96. And instead of voting up or down on those resolutions, the House felt it was an important enough issue to appoint a

committee, a task force, to review the issues and bring that report back in June to the annual meeting of 1997.

To be—to try to cover all the bases, representatives from ACOG, American Academy of Family Practice, and American Academy of Pediatrics, through the ethical and [1007] judicial committee and the Council on Scientific Affairs and two state representatives, one from Pennsylvania and one from Illinois were also selected.

And I was selected from Illinois to represent Illinois as a state representative on that task force.

Q. Why did they want to have an Illinois representative on the task force?

A. In the two resolutions that were brought forward to the interim meeting of the AMA came from Pennsylvania and Illinois. And because those states brought forward the resolutions they thought it appropriate to have a representative from each of those states.

Q. Doctor, have you done any work in the field of medical ethics?

A. I have been very involved in medical ethics at least for about the last 15 years. I did create the Ethical Committee for Evanston Northwestern Healthcare. I have been an invited speaker to national organizations on ethics of medicine, both national and regional at various levels. I have been a chairman of the Ethical Relations Committee for the Chicago Medical Society for the last 10 years, and had served on that committee prior to that.

I chaired the physician review committee for the Chicago Medical Society prior to that, and numerous

committees in the hospital. I have been in charge of quality assurance, [1008] audit, looking at ethical issues at hospital level and county level and the national level.

Q. Can you describe to us a little bit, doctor, a little more about what your service as chairman of the ethics committee of the Chicago Medical Society involves?

A. Sure. Either the Physician Review Committee, the Board of Trustees of the Chicago Medical Society or any other patient, insurance company or physician can file ethical charges against any member of the Chicago medical society. That would come before my committee. I would assess it. I would assign a couple other members of the committee to assess it.

If we felt there was sufficient data to go forward, we would then hold a hearing and actually bring that physician before the committee, review the material and then make decisions as to whether we thought it was ethically appropriate or not.

Then you have options of censure, probation or expulsion from the Medical Society.

Q. Doctor, I would like to show you what has been marked as defendant's Exhibit A-7 in this case.

Doctor, do you recognize that document, Exhibit A-7?

A. Yes, I do.

Q. What is that?

A. It is my current C.V.

Q. Is that a true and accurate copy of your curriculum vitae?

[1009]

A. Just checking to see how current it is, the last page. It does go to January, 2004, so it is rather current.

Q. Doctor, are the statements made in your C.V. correct?

A. To the best of my knowledge, yes.

MR. SIMPSON: All right. Your honor, I would like to move for the admission of A-7 into evidence.

THE COURT: Any objection?

MS. GARTNER: No objection.

THE COURT: All right, admitted.

THE CLERK: A-7 into evidence.

(Defendant's Exhibit A-7 was received in evidence.)

BY MR. SIMPSON:

Q. Doctor, are you familiar with the methods used by obstetricians and gynecologists in connection with terminating pregnancy?

A. Yes, I am.

Q. Could you just list for us at this point the ways that you have become familiar with those methods? Just list them for us now, and we'll ask you specific questions about them.

A. Clearly, I have been in private practice since 1975. I was resident before that, in medical school before that. And throughout that training had experience in various forms of abortions.

I was actually a medical student at Cook County, and [1010] we had numerous patients there, in

residency and in private practice, have been involved in abortions, abortion complications, taking care of patients who have had abortions, and my patients then returned to the office and took care of them.

So, experience, because of the extra emphasis on this area in about 1995 and '96 when it became more public knowledge, I got involved at our organization, the State Medical Society. We did literature research as to that. And the resolutions went to the AMA. As the chairman of the delegation, I was spokesperson for Illinois and had to do research on that.

I was later asked to write a journal article in JAMA, which is the most widely published medical journal in the world. And did significant research review in relationship to the article.

I was then asked to be an expert witness in the case in Ohio and did expert testimony there and again reviewed the literature and spoke with numerous other physicians, again, to present some of the programs.

There were a lot of physicians who I could discuss the issues with from across the United States. And then, I was asked to be an expert in this case. And so, again, I reviewed the literature up to the present.

And then, because of the involvement in this case I [1011] have been provided with probably dozens of declarations, depositions, articles. So I think I have a very thorough, up-to-date review and understanding of the procedures, the complications and have formed opinions on that basis.

Q. Doctor, you mentioned your own medical practice. Have you yourself had to remove the products of conception before pregnancy reaches term?

A. Yes, I have. As a practicing obstetrician, approximately 15 percent of all pregnancies have spontaneous abortions or miscarriages in the late term. Having done over 3,000 deliveries, if you take 15 percent of that, you are going to end up with about 450.

And those are both that occurred in the first-trimester, second-trimester and unfortunately even in the third-trimester.

I also because of I have such a large patient base, patients may get referred for abortions. And if they have issues will often come back to me because I am their primary doctor, they feel more comfortable. So I frequently will have to be involved in handling any complications in those procedures.

Q. Doctor, the instances when you have actually removed the products of conception before pregnancy reaches term, have all of those been instances in which the fetus had already died of natural causes or not?

[1012]

A. Essentially, yes. And in my expert testimony I did say each of the cases I was thinking of at the time the fetus had died. And actually talking about it and thinking about it more, there was an emergency situation where I was involved where a fetus had not died.

Q. Could you tell us about that case, please?

A. It was actually a patient came into the emergency room, and probably 10 years ago. That is why it wasn't at the top of my memory when I was first thinking about it.

She came into the emergency room. They called the general surgeons first. And she was actively bleeding intraabdominally. And so they knew she had

to go to surgery. And that was probably before the time of our instant data HCG's where we had instant data of that.

But they did a simple pregnancy test in ER, and it did come back positive. So the general surgeon said:

> "No one now. A gynecologist needs to go in there."

And so they called me, and I opened up and took her to surgery, because she was bleeding internally. I opened up her abdomen. And she was probably 10, 12 weeks pregnant. And sitting on the uterus was a pink, fleshy mass growing through the wall of the uterus.

And, again, I have a lot of experience. I'm a trained gynecologist. But I was certainly not sure of what [1013] this mass was. And I thought it was a sarcoma, a cancer of some kind. And we took off a piece of the tissue and sent it down for a frozen section. And it came back "placenta."

There is—I think different people know of different areas of the placenta. The placenta can, on occasion, rare occasion grow a little bit into the wall and be a placenta accreta.

Even more rarely it can grow into the wall. It is a placenta increta. And even more rarely the placenta, for some crazy reason, is so aggressive it actually grows through the wall and out the wall, which is what happened in this case. So it is an a placenta percreta.

You have got a life-threatening situation. The woman is bleeding. You have to—in that case I couldn't think of anything else to do other than actually do a hysterotomy, remove the placenta, which was growing

through the wall and suctioning out the uterine contents.

So I was doing an abortion on a live fetus to save the life of the mother. And the only other possible thing I could have done is do a hysterectomy, which would have left her without her uterus and no future possibility to conceive.

And in that circumstance, I felt it was in the best interest of the mother to do what I did.

And if the mother's life was at risk, that is the decision I would make. In that circumstance I did make that [1014] decision.

Q. So was the woman's uterus removed in that case?

A. The woman's uterus was saved, almost miraculously, because it was kind of a gutsy thing I wanted to do. I actually got—I was concerned about how well she would do postop and whether she would get infection or she would continue to bleed, because what I did was kind of unusual to take out part and leave part, but she did do very well.

And I did see her for a couple of years after that, then she moved out of state.

Q. Doctor, would a vaginal removal of the fetus have sufficed in that case?

A. Not at all, because the placenta had grown through the wall, so I would have—whatever I had to take out, that part of the uterine wall, with the placenta in it.

In those circumstances, it is like the placenta is almost acting like a cancer. It is not recognizing any boundaries, and it is just growing through the tissue.

Yet, it was supposed to be normal boundaries. It stops at the lining of endometrium. For whatever reason, in this case it just continued to grow through the wall.

THE COURT: Excuse me. Did the woman know she was pregnant?

THE WITNESS: I don't think so.

BY MR. SIMPSON:

[1015]

Q. Doctor, I believe you said this already, the fetus was alive?

A. The fetus was alive.

Q. But, of course, you said it was ten to twelve weeks, so the fetus did not live?

A. Well, actually, no, because I suctioned it out.

Q. It was previability?

A. Yes.

Q. All right. Now, doctor, aside from that particular case, can you list for us—you don't need to describe them at this point—but just list for us the method or methods that you've used to remove the products of conception.

A. Going through the gamut of typical procedures up to 12 weeks most of them are just suction curettage. Beyond 12, 13 weeks we would do variations of D&E's.

And most commonly in my practice beyond 18 to 20 weeks we would use induction.

Q. So, approximately—did you say you have used the D&E method?

A. Correct.

Q. Approximately how many times have you done that?

A. I am kind of giving a low estimate, because I haven't actually gone back and looked specifically. And I think in my expert report I said "maybe 20." I am sure it is actually more than that, but I was trying to be conservative rather than [1016] saying I did more than that.

Then if I talked about more after the 14 weeks, and actually the first-trimester stops in most people's textbooks at 12 weeks. So kind of the 13, 14 week is kind of a gray zone.

I was actually trying to say ones that were actually further advanced.

Q. Doctor, approximately how many times have you used the induction method to remove a dead fetus?

A. There are, unfortunately, many more than I would like. About 3 percent of women do have miscarriages in the second-trimester. And often you either do D&E's or inductions, depending on how far along they are. And there are sometimes stillbirth or intrauterine fetal demise at 20 to 25.

So that's—I said "20 to 30," but it depends on exactly what you count. Recently I have literally had unfortunately two that the baby died at 37, 38 weeks, which is a real tragedy. I am not sure if it's—it's obviously not second-trimester. It is third-trimester. So I am not exactly sure whether you want me to count those or not, but they are there.

Q. Let's include not just the second-trimester, but also the third on the induction method. So have you said 20 or 30 times you have used induction for that purpose?

A. At least.

[1017]

Q. Doctor, how would you compare the techniques used to remove the products of conception where the fetus has already died to the techniques used to do that where the fetus has not died?

A. The techniques are actually the same. And in reading the other depositions of other experts in this case, they don't make a distinction in whatever procedure they are using. Sometimes the physicians—"physicans"—sometimes the fetus is alive and sometimes it is not.

The more commonly in a procedure from reading all the depositions, more commonly that 26 to 27 week D&E's, D&X's are more commonly on dead fetuses. So they are doing the same thing.

MS. GARTNER: Your honor, I am not clear whether he is talking about his own practice or whether he is reporting on something from other people's depositions in this case.

THE COURT: Could you clarify?

THE WITNESS: Yes. I thought he asked me whether the procedures were the same, and I was saying:

"Yes, they are," and kind of showing that other people—yes, I believe they are. But in other deposi-

tions they are also—they are doing exactly the same procedure. So I think it just corroborates what I said.

THE COURT: Okay.

THE WITNESS: Yes?

THE COURT: I am a little unclear. You indicated [1018] you yourself have performed approximately 20 D&E's.

THE WITNESS: Correct.

THE COURT: And approximately 20 to 30 induced abortions, correct?

THE WITNESS: Yes, I am lowballing those numbers.

THE COURT: Fine.

THE WITNESS: Yes. Yes.

THE COURT: Let's say roughly about 50 in both categories? In both categories are we talking about cases in which the fetus had already died?

THE WITNESS: Correct.

THE COURT: All right. And the only instance involving a live fetus is the hysterotomy you described in the emergency room.

THE WITNESS: Correct. I have been involved in cases where patient comes into the emergency room maybe at 17, 18 weeks with an infection and is actually starting to begin labor on her own. And so you are taking care of that situation, and the fetus is alive. And you are starting, but you are still going to end up with a delivered fetus. Those are kind of more—you are in the process. There is infection of the uterus. It is usually contracting, anyway.

So you are in the process of just extracting the fetus during the process of what is really a labor process prematurely that the patient started.

[1019]

THE COURT: All right.

BY MR. SIMPSON:

Q. Doctor, you also mentioned having treated complications from abortion where women had received an abortion on a live fetus elsewhere, and then returned to you for treatment for complications.

Approximately how often do you have to do that?

A. They are—going all the way back to being a medical student at Cook County Hospital where they had a significant number of those even in the short period of time I was there.

But in practice, probably at least a couple of times. Two or three times a year. It is not uncommon, but it is not something we see every month.

Q. Doctor, have you consulted with other doctors at Evanston Northwestern Healthcare regarding the performance of abortions on live fetuses?

A. Yes, I have.

Q. Doctor, you also mentioned having studied the literature on abortion. And you mentioned several contexts in which you have done that.

First of all, the special AMA Committee on intact D&X, how did that service effect your familiarity with the methods of abortion?

A. It probably was the first time that I got as deeply involved, because that committee was appointed. And then, for [1020] several months reviewed the literature, had meetings, telephone conference calls, faxes. A significant amount of work went into preparing that task force report because it was a major report that was going to go before the entire House of Delegates. And so a significant literature research by a panel, by a staff, by other members of the committee, and, again, representatives of various counsels.

Q. Doctor, you also mentioned writing an article for JAMA. Is that the Journal of the American Medical Association?

A. Yes, it is.

Q. And can you tell us how you came to write that article?

A. Because of my involvement on the task force and involvement at the AMA House of Delegates and because the topic was so popular in the media at that time—things were going on at the national level. Actually, in Illinois, people were taking surveys.

What happened is that Dr. Grimes wrote a paper and sent it in to JAMA as supporting the continued need for the procedure the editors of JAMA wanted to use it. They have a controversy section where they have one article pro and one article con on an issue. And they thought this was such a prominent issue in the media, in the public at that time that this would be an ideal situation.

Because of my position on the task force, because of my activity at the AMA House of Delegates at the AMA. I was [1021] well-recognized in this area. They

had heard my presentations. And the editor of this portion of JAMA called me and said:

> "We have this one article. We need the article taking the position on the opposite side. And would you be willing to do this?

Recognizing it was a great deal of work to do this and would require a great deal of research, I did kind of think about it for awhile. And then, I did say I would be willing to do the work to prepare that article.

MR. SIMPSON: Your honor, I would like to show the witness Exhibit A-55. But we would like to make a substitution here, if we could.

I am aware that the copy of A-55 that is in the evidence binders is a copy of Dr. Sprang's article from the Congressional Record. But the print in that copy is very, very small.

With the court's permission, I would like to substitute a copy of a reprint of that article with more readable type.

THE COURT: I am sure that is fine.

You are right. I can't read that.

THE WITNESS: I looked at it. I couldn't read it, either.

MR. SIMPSON: Could I approach the witness, please, Your Honor?

[1022]

THE COURT: Yes, you may.

May I just discard this one?

MR. SIMPSON: Yes. That would be fine.

BY MR. SIMPSON:

Q. Doctor, I have shown you what is now Exhibit A-55 in this case. Do you recognize that document?

A. Yes, I do.

Q. What is that?

A. It is the article I wrote for JAMA in 1998.

Q. Doctor, could you—we are going to be talking in some detail about the content of the article. But could you at this point just kind of briefly describe it to us?

A. Basically, my emphasis—and really I had not been interested in the abortion issue before. But my only interest was really in the part, the intact D&X. And that's kind of what I wanted to write about.

Because the other article was more broad and included all of the later term abortions, they asked me to kind of try to include other things besides intact D&X. So I acquiesced, reluctantly.

So I actually kind of divided this article into the first portion, which specifically addressed intact D&X, and then I had to include a second portion. And there is a lot of overlap in the same complication rates and indications and when they do it. So, actually, it is broken into two parts. One: [1023] intact D&X, and then, in general, just abortions that are performed, I would say, late in the second-trimester. And by "Late in the second-trimester" I will probably say 20 to 27 weeks.

Q. Okay.

A. So it is divided that way.

Then, I kind of obviously needed to take some format, some way of setting it out. So I set it out as

kind of first defining, saying what brought this issue to the forefront, what was kind of going on in the media.

Then, I kind of used ACOG definitions and tried to use other definitions so everybody would know what we were talking about.

Then, I broke it into maternal considerations, fetal considerations, ethical considerations and what was going on in the various professional organizations, legislative and public. Because by this point 27 states had passed bans on intact D&X. And so there were all different areas.

So just to have a reasonable way of presenting information, I broke it into those areas. And then, I did the same thing for termination of late term pregnancies, in general, because that is what the editors wanted me to do.

Q. Thank you, Doctor.

Doctor, you mentioned doing research into—am I saying this correctly? Did you do research regarding abortion [1024] methods to write this article?

A. Correct.

Q. Research into the medical literature?

A. Correct.

Q. Doctor, does that article include discussion of the human fetuses' reaction to painful stimuli?

A. It does.

Q. So, have you done research into the medical literature on that topic, as well?

A. I have. Also in my formal training, I did spend time in anesthesia, which is obviously pain management

and spent some time there, as well. But specifically for this I looked for articles on fetal pain. I was looking at both the anatomic progression of when nerves go to different areas and how they progress up to the thalamus and the brain.

I looked at various studies that showed changes that had been done in different studies in ultrasound on blood flow and actually measuring hormones. And I will also say that I have been in nurseries with actually—was in a nursery in St. John's that had three or four babies that were delivered that were 23 weeks or 24 weeks.

And so then at that point they are babies, not fetuses, but during the same time frame that we are talking about, during the 23, 24 week time frame. And in the nursery at that level, you can see the response to pain. If the [1025] neonatologists are performing procedures, they give—they use anesthesia. And it is the same time frame we are talking about.

MS. GARTNER: Objection, Your Honor. I am not sure if he is giving testimony about fetal pain or not at this point. But he hasn't been qualified as an expert in any area yet, so I don't know in the context of trying to have him qualified, if he is actually getting into the area of giving testimony.

THE COURT: Let's let Mr. Simpson explain. You haven't moved to qualify him in any particular area. Is this one of the areas in which you are attempting to qualify him?

MR. SIMPSON: Yes, we are, Your Honor. And I was about to get to the point of asking him to be qualified.

But let's move on to the next topic, and then I will ask him to be qualified and state the subjects of that qualification.

THE COURT: Okay.

BY MR. SIMPSON:

Q. Doctor, you also mentioned having testified in court regarding abortion methods. Now, you mentioned this case, for one thing.

Have you testified in either of the other cases that are currently ongoing regarding intact D&X?

A. I have testified in Lincoln, Nebraska.

[1026]

Q. Were you qualified as an expert in that case?

A. Correct.

Q. Have you testified in the New York case?

A. I had—

MS. GARTNER: Objection, Your Honor. I am sorry, but I—and I apologize for objecting so much—but I believe that, in fact, in the Nebraska case, the court is not actually qualifying witnesses as experts, but is simply taking all of the experts that are presented, taking their testimony. And the court has indicated he will give the witnesses the weight that he thinks is appropriate.

But, in fact, nobody in that case has been proffered as an expert or qualified as an expert.

MR. SIMPSON: I was unaware of that, Your Honor.

THE COURT: Okay.

BY MR. SIMPSON:

Q. And, Doctor, will you be testifying in the New York case, as well?

A. Correct.

Q. I think you mentioned another case. You said "the Ohio case." Was that a case challenging the Ohio statute on what are called "partial-birth abortions"?

A. It was a case challenging an Ohio ban on intact D&X. And I was, to the best of my knowledge, was qualified as an expert in that case. And I did talk about both the medical aspects, the [1027] ethical aspects and fetal pain at some length.

Q. Doctor, was that Ohio case—

A. I was challenged by the plaintiff's bar, and the judge in that case did allow me to testify.

Q. Doctor, was that Ohio case Women's Professional Medical Corps versus Taft?

A. Correct.

Q. That was in the federal court in Ohio?

A. Correct.

Q. And did that experience affect the level of your familiarity with abortion methods?

A. Again, same reasons. Obviously, before you are involved in something like that, you research the literature.

And, again, you are given the opportunity to read declarations and depositions, which I just find actually reading a 200 or 300-page deposition in great detail on individuals who actually are performing them on a day-to-day basis gives you a great deal of insight

into exactly what they are doing, how they are doing it, and why they are doing it, because they are responding to very specific questions. So, yes.

MR. SIMPSON: Your honor, we would like to move to qualify Dr. Sprang as an expert in obstetrics and gynecology, including the methods used to remove the products of conception before term and their risks and complications, the ethical [1028] considerations that guide obstetrical practice and the reaction of the fetus to painful stimuli.

THE COURT: The second category?

MR. SIMPSON: The ethical considerations that guide obstetrical practice.

THE COURT: No, before that.

MR. SIMPSON: Just part of the first part, obstetrics and gynecology, including the methods used to remove the products of conception before term and their risks and complications.

THE COURT: All right. Is there any objection on those categories?

MS. GARTNER: Yes, Your Honor. We have obviously no objection to Dr. Sprang being qualified as an expert generally in the area of obstetrics and gynecology.

But, Your Honor, I would like to do some voir dire to see if we can define the scope of his testimony.

THE COURT: You may.

MS. GARTNER: Thank you.

[SPRANG—VOIR DIRE EXAMINATION]

BY MS. GARTNER:

Q. Good morning, Dr. Sprang.

A. Good morning.

Q. It is good to see you again. My name is Eve Gartner.

A. I know.

[1029]

Q. And we met at Evanston, right?

Dr. Sprang, you have done no clinical research in the area of abortion; is that right?

A. I am thinking because I am involved in helping the students do a lot of different things, as well. I don't believe I have actually been involved in a paper, though I do work with the students, and some of them are doing research on that.

Q. And you don't give formal, planned lectures on abortions to medical students or residents, do you?

A. I have. Yes and no. On the ethical aspects of it I have given presentations to residents and students on the ethics of, especially intact D&X.

Q. Have you ever given a formal, planned lecture on how abortions are performed to medical students or residents?

A. We had this discussion before. I have given presentations at luncheon meetings which are scheduled. I won't say how formal they are. But we have discussed this with the residents at luncheon meetings. And the question is, obviously: is that formal or not?

MS. GARTNER: Your Honor, may I hand the witness his deposition?

THE COURT: Yes.

MS. GARTNER: I will hand you one, as well.

BY MS. GARTNER:

Q. Dr. Sprang, I am hand handing you the deposition that was [1030] taken of you in this case in February. If you could turn to page 47 of the deposition.

And if you could look at the answer that you gave on lines 22 to 24 of your deposition.

And let me ask you, again: do you give formal, planned lectures on abortion to the medical students or the residents?

A. I will answer directly. What I said was:

"I do not give formal, planned lectures."

The distinction I am making is these lecture are not always that formal, but they are luncheon lectures. So, yes. But specifically if you are asking me formal, no. Okay?

Q. Okay.

A. It is a distinction, but it is real.

Q. Okay. And other than the piece that you were just talking about that was published in the Journal of the American Medical Association, JAMA, you have not published in the area of abortion; is that right?

A. Yes and no, because when you publish something like this there are then letters to the editor. And then you do response to that. So I have had other published responses to the letter to the editor in JAMA. I have given presentations on the ethics in the general area of intact D&X at bioethics seminars.

Q. Okay. What I specifically—

A. It is published.

Q. Okay.

[1031]

A. That is where I'm going with it. So it is published.

Q. Okay. So you have, after this article was published in JAMA, there was some letters to the editor responding, and then you replied to those letters?

A. Correct.

Q. Is that correct?

A. And in the bioethics seminar in Indiana they then publish the comments from that presentation in their hospital-wide magazines or journals.

Q. Okay. So that was published in a hospital magazine? It wasn't a peer-reviewed journal?

A. Correct.

Q. Okay. And this, the article that was published in JAMA—is it okay if I call it "the Journal of the American Association," JAMA?

A. Yes, certainly.

Q. Okay. So that was an opinion piece, correct?

A. I would not say that. It is definitely a peer-reviewed journal article. It was not an opinion. It was scientifically based. And when they—actually, the first draft, which is often the case, I said:

> "I probably should get more opinions."

And they said:

> "No. We want more scientific literature and more backing and more factual information."

[1032]

So that I actually had to then take another month or two and redraft it and pick at least another 10 journal articles which substantiated the comments I made in that article.

So I would not call it "an opinion piece."

Q. Okay. But isn't it correct as you testified just a few minutes ago, that the way this came about is that Dr. David Grimes had drafted an opinion piece for JAMA, opposing restrictions on later abortion methods, and the journal was looking for somebody to write a piece taking the opposite position to publish with Dr. Grimes?

And weren't they, in fact, published in a section of JAMA called "Controversies"?

A. Correct. But, I will not agree with you that it is an opinion piece. It is a scientific piece based on the scientific literature.

Q. There were competing pieces taking opposite viewpoints on this; is that correct?

A. Correct.

Q. Okay. Now, you had testified earlier in response to Judge Hamilton's questions about the numbers of abortions you've performed at the gestational—the number of abortions you've performed and the methods you've used, correct?

A. Correct.

Q. Now, you have not performed—even in the case of a [1033] demised fetus, you have not done an abortion using the D&E method after approximately 17 weeks of pregnancy; is that right?

A. That is correct.

Q. And that's because you believe that a physician must have significant expertise to do a D&E after that time period; is that correct?

A. I believe there is more risk involved unless you really do them on a daily basis, correct.

Q. But you would believe a physician must have significant expertise to do a D&E after 18 weeks, right?

A. Significant experience and expertise, correct.

Q. And you have many areas of expertise; isn't that right, Dr. Sprang?

A. Right.

Q. But doing post-18 week D&E's is not one of your areas of expertise, is it?

A. I will have to say: correct.

Q. Dr. Sprang, do you plan to offer testimony today about the safety of a method of abortion called "intact D&X" or "intact D&E"?

A. Based on my literature review and talking to physicians who perform them, yes.

Q. Now, it is your understanding, right, that this method of abortion is used primarily after 18 weeks of pregnancy?

[1034]

A. After specifically—and, again, a good deal of research and Haskell's report, which he presented to the National Abortions Federation in '92 says this is primarily used between 20 and 26 weeks.

Q. And that's a time period in which you have not done a D&E, correct?

A. Correct.

Q. And you have never performed an intact D&E procedure; is that correct?

A. There in—actually, in 16, 17 weeks I have on a dead fetus who also—she had started to go into labor herself. And I would say, essentially, it was an intact D&X.

Q. But you just testified that in your understanding is that intact D&E is used after 19 weeks of pregnancy.

A. Primarily.

Q. Okay. So, you—and in that intact D&E procedure that you did, how was the—can you describe how the procedure went?

A. Fortunately, as I said, it was a fetus had already been dead. We actually scheduled her for surgery. And just between like scheduling it and actually bringing her to the operating room, the cervix had started to dilate. And at that point she was partially doing it spontaneously.

The fetus was still inside. And it was very—at that point very easy to just extract the fetus.

Q. So, when you said you did an intact D&E, you basically used [1035] traction to pull the fetus out of the uterus?

A. That's my understanding of an intact D&X.

Q. You didn't have to do anything to reduce the size of the fetal head?

A. Because of the softness of the fetus and the amount of dilatation, that is correct.

Q. Okay. And you—so that's a different—that is not really a D&E procedure in the way that you under—I am sorry.

That is not really an intact D&E the way you understand, based on your literature review; is that correct?

A. It's not totally consistent with the definition that they usually have to do something else to the cranium, the fetal skull at the—

Q. And you have never done that, right? You have never had to do anything to the fetal skull to complete the delivery?

A. May I finish the first—

Q. Sure. I am sorry.

A. Well, repeatedly, in looking at those declarations —and it is more information for me now—oftentimes they don't have to do anything, either. The fetal skull actually just delivers.

And actually in one of the expert depositions they actually say that is their preference. That the cervix is dilated enough that they can just simply deliver the fetus the same way I would do it for breech extraction. And I have done [1036] a hundred of those. You don't need—if it is dilated enough, you don't need to do anything to the skull. You maneuver called the mauriceau-smellie-viet—they never spell it correctly—try to flex the fetal head to make it a smaller diameter. You can actually, if the cervix is dilated enough, deliver it.

Q. And you have—

A. And that is what is being done in this procedure because I've seen several of the declarations in depositions that say that. And actually one of the experts actually says that is the ideal situation.

Q. And when you—

A. So they are—

Q. —Say you've done a total breech extraction a hundred times, you are speaking about at term to deliver a live baby, right?

A. Here, again, not necessarily at term, because definition of "at term" would be beyond 37 weeks. And people go into premature labor at 32 weeks, at 34 weeks. Twins more commonly go into premature labor in that time frame.

So I have done total breech extractions various times frames, which can all be considered to be premature. And, again, I have been doing this long enough before some of the current thinking that that is not all we do now. We would do a cesarean section. But at that point in time we did [1037] extractions.

I had a set of twins that I did a—

Q. I am sorry, Dr. Sprang. I am just afraid we are never going to get—

MR. SIMPSON: I'm sorry, Your Honor. I need to object to Ms. Gartner interrupting the witness. It has happened—

THE COURT: I am not sure he is responsive to her questions. She is trying to qualify him.

THE WITNESS: You have to—

THE COURT: I think I'm going to ask you just to answer the questions as directly as you can.

THE WITNESS: Yes, ma'am.

THE COURT: You, obviously, will get another chance to talk.

THE WITNESS: Okay.

BY MS. GARTNER:

Q. Yes. And I don't mean to cut you off. I just—I think—I don't want you to have to go to the effort to keep talking about something that is not really that relevant here.

And my question really—I might have misspoken in saying "at term."

But let me just ask you: the breech extractions you've done have been to deliver a live baby; is that correct?

A. Correct.

[1038]

Q. Thank you.

Now, you have never witnessed an intact D&E abortion being performed, have you?

A. Correct.

Q. And from listening to your testimony this morning, from obviously being present at your deposition earlier in this case, and from reading the transcript of your testimony in the Nebraska case earlier this week, I've identified what I think are six bases for your familiarity with the intact D&E abortions.

And I have tried to be as liberal in my understanding of your testimony as possible. And I would like to list for you what I understand to be the bases for your testimony about intact D&E.

And if you could just tell me whether I am correct about that, that that is, in fact, part of the basis for your testimony. And then, I would like to go through them in a little more detail, if that is okay with you.

So my understanding is from your deposition you said that part of your familiarity with this procedure is based on a conversation with the physician who was the President of ACOG at the time that ACOG issued its statement of policy regarding what it calls "intact D&X" in 1997? Is that part of the basis?

A. No.

Q. Okay. That's good.

[1039]

Now, the other thing I identified is that you—part of your basis is from the work you did on the AMA task force that you were discussing with Mr. Simpson; is that correct?

A. Correct.

Q. Now, I think Mr. Simpson had referred to that as a task force on intact D&X. But it wasn't, in fact, a task force on intact D&X, was it?

A. I would say: Yes.

Q. Was it not a task force more generally on late term pregnancy termination techniques?

A. The reason the task force was set up was to look at intact D&X. That was the resolution that caused the task force to be set up.

Q. Did the task force prepare a report on its work?

A. Yes. It looked at more broad information as a basis trying to get the complication rates, the number of procedures. But the reason for the task force being set up is intact D&X.

Q. Okay. And in addition, an additional basis for your testimony is conversations you've had with a few physicians who perform intact D&X; is that correct?

A. Correct.

Q. Okay. And an additional basis is a paper that was presented by Dr. Martin Haskell to the National Abortion Federation in 1992; is that correct?

[1040]

A. Correct.

Q. And another basis is the declaration and depositions of physicians in both the federal court case in Ohio where you testified and other physicians who have testified in this case; is that correct?

A. Correct.

Q. And I think you also mentioned this morning an additional basis is the opinion piece you did or the piece you did—I am sorry—for JAMA?

A. Correct.

Q. Is there anything I have omitted from this list in trying to identify the bases for your testimony?

A. I think other articles are out there, as well, in general. And I started talking about D&E. And obviously the most recent article—in the declaration of Chasen the most recent article that was introduced on his article on trying to compare the traditional D&E and intact D&X.

Q. Okay. So let's go back through some of these bases in just a little bit more detail. The AMA task force, I think you testified that there were 10 physicians on that task force; is that correct?

A. Correct.

Q. Ten including yourself?

A. Correct.

Q. Okay. Now, were any of the physicians on the task force [1041] physicians who perform intact D&E?

A. I don't know that for a fact. I do know that at least four of them are obstetrician gynecologists. I believe that is correct.

Q. During the meetings of the task force did any of the obstetrician ever indicate they performed an intact D&E?

A. Not to my recollection.

Q. Now, did—in preparing that report, did the task force meet with any physicians who performed intact D&E's?

A. I don't believe we met with any. Whether did they interview? Was there information from interviews with physicians who performed them? I am not a hundred percent sure.

MR. SIMPSON: Your Honor, I don't know how many more questions there are on the AMA task force, but I believe we are getting beyond voir dire here and into discovery regarding the AMA task force.

MS. GARTNER: Well, your honor, I think if the participation in the AMA task force is a significant part of the basis for his opinion, I think we need to understand whether the task force, in fact, did an investi-

gation that would validly lead to his having firsthand knowledge about these procedures.

THE COURT: I will allow you to go further.

MS. GARTNER: Thank you.

[1042]

BY MS. GARTNER:

Q. Did the task force speak directly with any physicians who perform intact D&E's?

A. Did I personally? No. Do I believe representatives from ACOG, from other councils? I do believe they did, because they talk more specifically about it, so yes.

Q. But did anyone on the task force speak with physicians who perform intact D&E's?

A. Yes, I believe they did.

Q. Okay. But you did not?

A. I did not.

Q. And did anyone—

A. I had spoken with people prior to that who did do intact D&X.

Q. Let's talk about that. With respect to those physicians that you have spoken to that perform what you are calling intact D&X, am I right that there is only two incidents where you can actually remember talking to an individual who performs intact D&X, right?

A. Yes and no. There were two that I spent a significant more time with that were more memorable discussions because I talked to them after the meetings, as well, and got more information.

There were several —and I believe I said this in my deposition. When I am putting on programs and putting on high risk fetal medicine programs, often a case example would [1043] be a patient comes in at 23 weeks with a ruptured bag of waters. What are the different ways of handling that situation?

You are talking about a fetus at that point that has maybe a 15 percent viability at 23 weeks. If you can carry it a little further you would have greater viability: 50 to 75 percent.

So you get different opinions from different maternal fetal medicine physicians as to some would try to wait and carry it a little further.

So in discussions of those you get different opinions from physicians in the audience who are from all over the United States. And some of them might have more aggressive roles, aggressive positions, because they are more familiar with doing these D&X's than, say, the way they would handle it than just terminate the pregnancy and then let the patient get pregnant again.

The majority of physicians in those situations would say if there is not a fever, admit the patient to the hospital, keep them at bed rest for a couple of weeks and try to get it further along.

So you are talking about these procedures. And you are talking about it with physicians who are giving their opinion of how they would handle that situation. And one of the ways is to do a D&E or intact D&X.

[1044]

Q. Now, let's talk specifically about what you refer to as the two memorable occasions in which you've spoken with physicians about intact D&X.

With respect to those two individuals, you actually can't recall the names or locations or dates involved with any of those conversations, correct?

A. Correct. As I said, if you are giving three to five programs a year to hundreds and ultimately thousands of physicians, it is very hard to remember even what city it was in.

Q. Right. So these were the memorable conversations about intact D&X, but you don't remember who the physicians were?

A. The information was memorable. That is what I was looking for was trying to acquire information.

Q. Now, let's talk about Dr. Haskell's presentation in 1992 to the National Abortion Federation.

Were you present when he made his presentation?

A. I was not.

Q. Have you ever met Dr. Haskell?

A. I may have seen him in Ohio. I don't recall, because he was—in the Ohio case he was actually one of the plaintiffs.

Q. Have you ever spoken with Dr. Haskell?

A. I could have, because I spoke—I could have. I could have said "hello" in the courtroom. I don't remember.

Q. Okay. But if you spoke to him it was just to say "hello"?

[1045]

A. Yes.

Q. Do you have any firsthand knowledge of whether Dr. Haskell still performs abortions today in the way he described in his paper in 1992?

A. I know what he was doing at that point in time. Do I know exactly what he is doing at this point in time? I do not.

Q. Okay. Now, with respect to the declarations and depositions in the Ohio case and this case, this is—you've read the declarations and depositions, correct?

A. Correct.

Q. Have you met the people whose declarations and depositions you've read other than maybe to say "hello" to them in the courtroom?

A. I know some of them personally, yes.

Q. Okay. Do you have any firsthand knowledge about how they perform abortions other than reading their depositions and declarations?

A. To some extent, yes, because some of them are in my institution and I do know what the residents say about what is going on. So to some extent yes.

Q. So you are referring specifically to Dr. Hammond and Dr. Frederiksen?

A. Yes, correct.

Q. Other than Dr. Hammond and Dr. Frederiksen, you don't have any firsthand knowledge of how they do abortions; is that [1046] right?

A. How they—correct.

Q. And with respect to Dr. Hammond and Dr. Frederiksen what you know about how they do abortions is from residents in your institution?

A. Correct.

Q. And then, now turning to the issue about fetal pain, you are not an expert on fetal pain, are you?

A. Only insofar as I did take as—part of my training and residency was in anesthesia. Again, in writing the papers, I reviewed literature, reviewed a number of articles on the anatomic progression of the nerve supply in the fetus. And I understand that. I understand the growth of the nerves to the skin and where the nerves are going to the thalamus and then they reach the subcortex.

I have been involved to that extent.

Q. But you are not a neurologist, are you?

A. I am not a neurologist.

Q. And you are not an anesthesiologist?

A. I did have training in anesthesia.

Q. You have done no clinical research yourself in the area of fetal pain, have you?

A. The clinical research I've done is when I am doing an amniocentesis at 16 weeks and poke the baby with the needle and the baby's arm retracts.

[1047]

Q. You testified in your deposition, Dr. Sprang, that part of the basis for your opinions about fetal pain is the testimony that was given in the Ohio case by an anesthesiologist; is that correct?

A. I did read the deposition of the anesthesiologist, and I believe from Vanderbilt where they are actually doing intrauterine surgery at 20, 21, 22 weeks. And they, I believe as you know in those cases actually open up the abdomen—

Q. My question, doctor—

A. They have the fetus in front of them.

Q. I am not asking you what he testified. I am asking you whether reading that deposition is part of the basis for your testimony about fetal pain?

A. Correct.

Q. But you don't remember exactly who that anesthesiologist was or where he worked, do you?

A. I could easily get that information.

Q. But you don't recall, do you?

A. No.

MS. GARTNER: Your Honor, as I said, we agree Dr. Sprang is an expert in obstetrics and gynecology, but we don't believe that he meets the requirements under rule 702 or 703 to offer opinions regarding the safety of intact D&E or fetal pain. Rule 702 requires that expert testimony be based on sufficient facts or data.

[1048]

And while a physician may be an expert in his or her specialty area, as Dr. Sprang clearly is, that physician can only offer expert testimony where he bases his opinion upon specialized knowledge or experience on the particular subject.

And Dr. Sprang has no specialized knowledge regarding intact D&E procedures.

Essentially, Dr. Sprang bases his opinion on conversations with other medical professionals, on a presentation given by Dr. Haskell, on declarations and depositions of experts in this case and in another case. And these sources are all hearsay.

And while Dr. Sprang is permitted to base his opinion testimony on hearsay, he can't simply summarize these sources for the court and essentially serve as nothing but a conduit for the hearsay evidence, without adding anything to it.

And we would submit that that is really what would happen if Dr. Sprang testified about intact D&E: He would be a conduit for reporting to the court about other people's experiences, which he understands simply from reading about them.

And, in addition, because Dr. Sprang can't remember the names, he bases his testimony, in part, on conversations with two physicians, but he can't remember their names.

So there was no way for plaintiffs to attempt to [1049] verify whether these were reliable sources or not or attempt to contact those physicians to find out exactly what they understood their conversations to have been about.

So for those reasons we would ask the court to restrict Dr. Sprang's testimony about abortion practice and safety to those abortion methods that he has actually performed at the gestational ages that he has performed them.

And in addition we would ask the court to find that Dr. Sprang is not an expert in fetal pain. I understand that the government has another expert directly relating to fetal pain. He will be testifying next week.

Dr. Sprang is not an expert in fetal pain, and we believe he should not be permitted to testify on that subject.

THE COURT: Thank you.

Mr. Simpson, your response?

MR. SIMPSON: Your Honor, could I ask a few follow-up questions to the witness and make some argument, please?

[M. LEROY SPRANG, M.D.—CONTINUING DIRECT EXAMINATION]

BY MR. SIMPSON:

Q. Dr. Sprang, Ms. Gartner asked you about reading Dr. Haskell's presentation. Have you read any other presentations on intact D&X?

A. I have, and various articles, and, again, in declarations and depositions.

[1050]

Q. Have you read a presentation by Dr. McMahon on intact D&X?

A. I have.

Q. Doctor, earlier you testified as serving as the chairman of the board and president of the Illinois State Medical Society. Has that service affected your familiarity with abortion methods?

A. It has, again, because of the case reviews and because of reviewing quality assurance things at that level, you are presented cases like that.

Q. Doctor, have you been—at least at times—the only obstetrician gynecologist on the board of the Illinois State Medical Society?

A. Most of the time I am the only obstetrician gynecologist on the board. And, similarly, with the liability insurance carriers as chairman of the board, and being the only OB/GYNE most of those cases have always been presented to me.

Q. So how has your being the only obstetrician gynecologist in those contexts affected your familiarity with abortion methods?

A. Any of the cases that resolve around that area are brought to me.

MR. SIMPSON: Your honor, Dr. Sprang obviously has a vast experience and background in obstetrics and gynecology, in general. He has, besides that, that general experience and knowledge of female anatomy and how things work and in providing treatment in those contexts.

[1051]

He has, as he has testified, removed the products of conception himself many times and has treated complications of abortions a number of times.

He has done an extensive study on abortion methods, including intact D&X. He has testified in two other cases relating to intact D&X. And he has read many materials from physicians in connection with those cases.

He has spoken—as we have heard, he has spoken to physicians who perform this procedure. And I should point out in that regard, Your Honor, the way in which doctors typically gain much of their knowledge is by discussing with other physicians and learning in that way.

He does perform induction abortions after 16, 17, 18 weeks. And, Your Honor, I would point out that under 702, a witness—it says:

> "A witness may be qualified as an expert by knowledge, skill, experience, training or education."

I think plaintiffs' argument amounts to saying that a witness has to have all of those aspects of expertise. But, obviously, Dr. Sprang has—even if we are only limiting it to intact D&X, he has the knowledge, even if he doesn't have the experience in performing that precise procedure.

I should say finally, too, Your Honor, plaintiffs' counsel's argument would appear to amount to an argument that [1052] defendant in this case can only call physicians who have performed intact D&X.

And I'm sure the court can appreciate the difficulty of finding a physician who has performed intact D&X who would testify that it is medically unnecessary and unsafe.

THE COURT: Okay. All right. You all have been fully heard on the qualifications of this doctor.

MR. SIMPSON: Yes, your honor.

THE COURT: I have some concerns. I don't doubt that Dr. Sprang is a very well-qualified and experienced obstetrician and gynecologist.

My problem, Mr. Simpson, is not that he doesn't have any hands-on experience performing D&X. I appreciate the difficulty that that were the case. He doesn't appear to have any personal experience with late term abortion procedures that are at issue here.

He has testified that he has only performed procedures on 6 to 17-week fetuses. He has not only himself never performed an intact procedure, aside from the one hysterotomy, but he has never observed the performance of that procedure.

It would seem to me that if I were to accept him as an expert on intact D&X, that that would necessarily mean that anyone who is an OB/GYN would be able to review articles, talk to other physicians, and thereby be an expert.

[1053]

I kind of think 702 requires a little bit more than that. So, I am not going to qualify him as an expert in the subject of intact D&X. Therefore, he may not give an opinion thereon.

With regard to fetal pain, I don't believe that his experience as an anesthesiologist or his training in anesthesiology is in and of itself enough to qualify him as an expert in that regard, particularly when I compare his background and training and experience with that of the expert that you proffered on that subject, who I have approved, at least tentatively, to testify on that area.

But the doctor certainly can testify as a percipient witness on the question of fetal pain. He can certainly testify as to what he himself has observed. But he cannot testify as an expert in offering an opinion on fetal pain.

So with that said, he may testify as only a percipient witness on those two areas, and not on an expert. You offered him as an expert on the question of the methods of removal of products of conception.

To the extent that that includes intact D&X, he may not testify on that limited area. But he may testify on the other areas, because he does have experience on the other methods of removal of products of conception.

MR. SIMPSON: Your Honor, obviously the core issues here are the safety of intact D&X and its relative safety in [1054] relation to dismemberment D&X and induction, and also secondly the medical necessity, or lack thereof, for using the intact D&X procedure in any particular medical circumstances.

Your Honor, if I can ask this. Your Honor, does the court's ruling mean that the court is going to preclude us from asking Dr. Sprang regarding his expert opinion on the medical necessity, if any, of intact D&X and the relative safety of intact D&X versus other procedures?

THE COURT: Well, my thoughts were primarily with regard to the actual technique itself. I wasn't focusing so much on the safety of that technique. But you all can address that before I make a final determination as to what that limitation entails.

Are you offering a proof of some kind that he does have expert testimony that is not affected by his lack of experience in D&X that might be pertinent on the question of the medical safety aspect of it?

MR. SIMPSON: Absolutely.

THE COURT: What is that?

MR. SIMPSON: Well, Your Honor, based on his broad knowledge of obstetrics and gynecology in general, and his broad knowledge from many different sources as to how intact D&X is performed, we believe that he can give an expert opinion as to whether that procedure is safe, safer, less safe than other abortion methods, and regarding whether that procedure [1055] needs to be used in any particular medical context.

THE COURT: All right. Response?

What I am trying to figure out is there a way to parse this so he could—obviously, the defense wants his testimony on various different subjects. I have ruled that with regard to the techniques involved he has no expertise.

However, there is the question of whether or not, notwithstanding his personal experience and expertise in performing it, whether or not there is still room for him to give his own legitimate opinion. Indeed, I guess could any OB/GYN opine on the safety of it.

It would seem to me that most practitioners do form opinions about the safety based of procedures upon the kind of activity that Dr. Sprang is engaged in, and that is by reviewing reports and that kind of thing.

MR. SIMPSON: If I can make two other points, please, Your Honor.

As I think I mentioned earlier, if the court is going to preclude us from asking Dr. Sprang about those two core areas, because he has not done intact D&X procedure, that—

THE COURT: It is not because he has not done the procedure. I do not require that in order for a

witness to be qualified to give that kind of opinion that he actually have performed it, but he actually has to have some personal [1056] knowledge. It is not just a matter of talking to others and making a decision about the actual procedure.

Safety of a procedure is a little bit different, though, because I would imagine most doctors give their experience in being able to determine whether or not something is safe from reading and talking to others. That's a little bit different.

There is testimony here about the actual technique and how it is performed, et cetera. That's separate and apart from whether or not that technique is safe.

MS. GARTNER: Your Honor, I think we would have no problem with the way that Your Honor has articulated it. But our concern was that Dr. Sprang isn't in a position to describe for the court how this technique is done because he has not done it or witnessed it.

But we don't have a problem with him as an obstetrician gynecologist testifying about his opinion of the safety. And your honor can judge how weighty that opinion is given he has no experience with it.

THE COURT: Certainly.

MS. GARTNER: Thank you.

THE COURT: Then, I think that that's how I will resolve the issue. He will not be qualified to testify about how the technique is performed, but to the extent that he has a view about how it is performed based upon what he has read, he [1057] may give an opinion

about how safe that is relative to the other procedures that we have been discussing here.

MR. SIMPSON: Thank you, Your Honor.

THE COURT: We are going to take a break, and then maybe you can reformulate your questioning. I'm sure the ruling will have some effect on how you want to approach your examination.

We will break for 15 minutes.

(Recess taken at 10:00 A.M.)

(Proceedings resumed at 10:15 A.M.)

THE COURT: Okay. Now, just to make sure that before you get started that we all understand the parameters, I made the finding that the doctor doesn't have sufficient personal experience to qualify him as an expert in how D&X or intact D&E's performed.

That is based not only upon the fact that he hasn't performed the procedure, but also that he hasn't supervised anybody else performing it. He hasn't observed it being performed by anybody else. He has not been taught the procedure, nor has he himself taught the procedure to someone else.

The witness may opine, however, on the safety of the procedure based upon his understanding of what the procedure entails and based upon his independent study and review of the procedure. He may offer an opinion on how safe it is or unsafe * * *.

* * * * *

[1079]

Q. Doctor, do you have an opinion as to whether the intact D&X procedure presents significant risks to the woman?

A. I do.

Q. What is that opinion?

A. I do present—I have the opinion that it presents serious safety risk to the mother.

Q. Do you have an opinion or opinions as to what those risks are, yes or no?

A. I do.

Q. Could you just at this point, doctor, list those risks for us, in your opinion? Just list them at this point, and we will ask specific questions about them.

Q. The risk of the serial dilation in the cervix, the extent to which the cervix is dilated, the risk of infection from the laminaria, the risk of trauma from doing an internal podalic version, the risk of trauma from using a sharp instrument, mainly scissors, in doing this procedure.

Q. Doctor, first of all, let's go through each of those. You mentioned the risk of the dilation of the cervix.

Can you describe for us why you—why it is your opinion that dilation of the cervix for intact D&X presents risk to the woman?

A. In each of the steps we talked—in each of the steps we spoke of, by first mechanically dilating it from 10 to 11 millimeters, which is what he says he does, that is a [1080] certain amount of cervical mechanical dilation and trauma.

Placing laminaria in, both a certain amount of trauma from the laminaria, and then from the dilation with laminaria, the potential for trauma to the cervix.

Again, placing 20, 25, 30 laminaria in the second day, again, the amount of dilatation is much greater,

and therefore numerous articles in the past have said the amount of cervical dilatation does have the potential for damaging the cervix and the potential for either leading to incompetence or premature labor and delivery in subsequent pregnancies.

Q. Doctor, you mentioned cervical incompetence. Can you kind of describe to us what that is?

A. What happens in various procedures is in the process of dilating the cervix, some actual trauma is done to the tissue of the cervix so that in a subsequent pregnancy as the uterus and the pregnancy progresses, typically at about 14, 15, 16 weeks, because the cervix is weaker, the amount of pressure in the uterus causes it to just passively dilate, and thereby losing that pregnancy.

Q. Doctor, you also mentioned premature labor. Can you describe to us what that is?

A. If you—again, if you damage the cervix, then even if it doesn't cause an incompetent cervix in loss mid-trimester, it, as the pregnancy progresses, the intrauterine contents clearly are increasing in size and mass and weight, and the cervix [1081] which normally may be able to go to 40 weeks, may, because of its weakness, start going into labor or have contractions at anything that I will call premature labor, at anywhere from 27, 28 weeks on to 37 weeks, which is the definition of premature labor and delivery.

Q. Thank you, Doctor.

I would like to read a couple of sentences to you from your JAMA article. Do you still have that in front of you, Exhibit A-55?

A. I do.

Q. I would like to read a couple of sentences from that and ask you a few questions about them. On the third page there is a heading toward the top of the page that says:

"Termination of Late Term Pregnancies."

Do you see that?

A. Yes.

Q. I am going to read at the bottom of that left-hand column. There's a sentence that starts:

"Dilation and evacuation procedures."

Do you see that?

A. Correct.

Q. "Dilation and evacuation procedures commonly used in induced midtrimester abortion may lead to cervical incompetence, which predisposes to an increased risk of subsequent spontaneous abortion, especially in [1082] the midtrimester. Cervical incompetence is more prevalent after midtrimester termination of pregnancy than first trimester termination because the cervix is dilated to a much greater degree."

Are those your words, doctor?

A. Correct. And I gave the references in there. That is the low—the numbers after that are the articles that would substantiate what I said.

Q. And is that your testimony today?

A. That is my testimony today.

Q. Doctor, just to make one thing clear that excerpt uses the term "midtrimester." Does that simply mean the same thing as second-trimester?

A. Correct.

Q. Doctor, if an abortion were to cause cervical incompetence or pre-term labor, would the existence of that condition be discovered at the time of the abortion?

A. No, it would not.

Q. Let's see. You also mentioned infection as a potential risk of intact D&X. Before I ask you about that, could I ask you, doctor, what expertise you have in any—if any, regarding obstetric and gynecological infection?

A. Obstetric and gynecological infection has been a special interest and expertise of mine for approximately 20 years. I have been giving presentations as an invited speaker for about * * *.

* * * * *

[1085]

And I know that happens just obviously intuitively it happens, but the different authors, including Haskell, describes it in his paper that sometimes it breaks and sometimes it doesn't. And the next day when they remove them and proceed to the next step of the procedure, if it has—his comment is "if it hasn't already ruptured," which obviously tells you sometimes it does, then he ruptures the membranes.

So you have another significant risk of infection there, especially if it broke. You inserted them on day two, and you waited to day three to do the procedure, you've got a ruptured bag of waters with foreign bodies sitting in the cervix for potentially 24 hours.

Q. Doctor, you said something a few minutes ago about the amount of bacteria in the vagina. What I think you said was:

"10 to the ninth"?

A. Yes. It is a mathematical term. And you add 10, and add nine zeros. That is the number.

Q. Doctor, I think you also mentioned the internal podalic version as presenting a risk to the patient. Why is it your opinion that that maneuver presents a risk to the patient?

A. Having done it as well, there is a strong mechanical force in taking the fetus and basically forcing it to do a summersault within the uterine cavity. These are not little things that you just kind of push gently, and it just turns. It doesn't work that way.

[1086]

You are using a great deal of force in turning it upside-down that does trauma to the uterine cavity and could disrupt the placenta and cause bleeding. And rarely things like amniotic fluid embolus. Those are not common things that could happen, but rarely they could. And, in fact, in Williams' textbook of obstetrics, which is one of the most premiere, respected obstetrical textbooks for teaching medical students, when I was a student was the primary textbook, it specifically says that there are very few, if any, indications to do internal podalic version other than the second twin.

And in various editions he actually says it is potentially harmful. He says that it is the most common cause of traumatic uterine rupture.

Q. Doctor, if I can ask a few follow-up questions on those things. You mentioned disrupting—the potential for disrupting the placenta. What can that lead to?

A. Again, these are rare situations, but there is potential trauma if you disrupt the placenta at that point. There will be bleeding. And you are also—you have got vernix parts, white stuff on the fetus. There is not as much that early in pregnancy.

You have still got some amniotic fluid around. When you disrupt the placenta, some of that material can get into the maternal circulation, which could cause an amniotic fluid embolism in the mother, which is a very serious situation.

[1087]

Q. Is there any risk in that internal podalic version of causing maternal bleeding?

A. Because if you do separate the placenta, all the blood supply to the uterus goes to the surface of the placenta and stops there. If the placenta starts to separate, you, in fact, have an abruption of a placenta, and there would be internal hemorrhage.

Q. Abruption of the placenta, is that complete separation?

A. It could be a partial or a total abruption. And a portion can be separated and a remaining portion still attached.

Q. Doctor, would the degree of risk—you've testified to the fact that you have done the internal podalic version. And I assume you mean in delivering babies?

A. Correct. In similar time frames, because if you are doing an intact D&X at 23 or 24 weeks, when we

have twins they could go into labor at 28 weeks. They are very close in proximity to size. And if—I have done internal podalic versions.

I have actually delivered both of them breech. I actually delivered the first baby with internal podalic version, and then did a breech delivery. And then went in and grabbed the second baby and did a breech extraction of the second baby.

So, yes, I have done that.

Q. Doctor, you quoted a couple of sentences from Williams' Obstetrics, the textbook that you mentioned?

* * * * *

[1090] patient from piercing the back of the fetal skull in an intact D&X. Why do you believe that presents a risk to the mother?

A. Again, specifically using Haskell's description in his paper, what he—as he describes in detail, is if the head is trapped at the cervix, what he does is try to hold—puts some traction on the feet, put two fingers on the shoulders to lift the cervix so it is out of the way so it is less likely to get traumatized.

With the other hand —and my impression would be it is more blindly. I am sure sometimes it is low enough that you can actually see it. If you can get enough traction and bring it down low enough, but his description is that by feel you follow the spinal cord up the center to the base of the skull.

And then by feel, you are jabbing. No. "Jabbing" is not a good word. You are pushing the scissors through the fetal skull.

If you stay directly at the midline, that is a relatively avascular area. It should be relatively safe. But when you can't see that well what you are doing, and you are forcing them in on the fetal skull, it is certainly not inconceivable that because the skull—part of it is bone—it can slide a little to the left or to the right.

And if that happens to be the location where the uterine arteries come into the cervix, and if you were unfortunate enough to actually go sideways in either direction, [1091] could have significant hemorrhage in that situation.

Q. You said "significant hemorrhage," and you mentioned the uterine artery. Do you think there is a potential for actually piercing the uterine artery?

A. I do believe that potential is there. You have got scissors. You have got close proximity. And you are forcibly pushing the scissors through the skull. If you hit a soft spot, that should be easy. If you happen to get a firm spot, the scissors could just as easily slide one direction or the other.

And a pregnant uterus at term gets a pint of blood a minute going to it. So it is less than that at 23 or 24 weeks, but a very significant amount of blood supply.

Q. Thank you, doctor.

Do you have an understanding—you may have mentioned this earlier—do you have an understanding as to the gestational age at which intact D&X is usually used?

A. Again, specifically, it is stated in Haskell's presentation. And he says this procedure is often used in

the twenty—in fact, he says it is convenient to use in the 20 to 26 week time frame.

Q. Now, I believe you said earlier, Doctor, that disarticulation of the fetus in a D&E would become quite difficult, I believe you said, after 20 weeks?

A. It becomes more and more difficult with each passing week * * *.

* * * * *

[1105]

Q. Does this paragraph mean that serious complications are more likely with D&E than with D&X?

A. You can't come to that conclusion statistically in any way or I am sure they would have presented that. These complications are so uncommon you would probably need thousands of patients in both arms to see if there are any statistically significant difference. These are things that are just, I would say, a fluke.

The disseminated intravascular coagulation was, as they pointed out, was in a dead fetus, and if there was—

THE COURT REPORTER: I'm sorry—

THE WITNESS: —and it would be related to that, and not related to the procedure. And I think in this paper they in no way brought up that they continually thought the difference in the procedure was the cause of these.

So it is just the study does not have anywhere near enough numbers to look at things that are this rare to say there is no meaningful difference.

BY MR. SIMPSON:

Q. The next paragraph on page 8, which is the second full paragraph on the page, if I could read the first part of that:

> "45 women (17.1 percent) in the dilation and evacuation group and 17 women (15.0 percent) in the intact dilation and evacuation (sic) group had a subsequent pregnancy and receive care in our medical [1106] center. There were no second-trimester spontaneous abortions in either group. Spontaneous pre-term birth"—if I could stop there for a moment,

Doctor, can you explain to us the difference between spontaneous abortion and spontaneous pre-term birth?

A. Typically by protocol spontaneous abortion would have to happen before 20 weeks. Once you go beyond 20 weeks it would be considered a pre-term labor.

Q. Okay. Continuing on quotation:

> "Spontaneous pre-term birth occurred in seven"—or, I am sorry—"2 of 17 (11.8 percent) pregnancies in the intact dilation and extraction group compared to 2 of 45 (4.4 percent) in the dilation and evacuation group."

Doctor, is this difference in the rate of spontaneous pre-term births statistically significant in the context of this study?

A. Again, because the numbers were so small, it doesn't have the power to demonstrate that. You can see that by the fact that they said the p value was .3. For it to be a statistically significant the p value would

have to be under .05. And you can't demonstrate that when you have such small numbers.

Q. Can you draw any inferences at all from these figures?

A. What I would have to say is, again, you are saying that [1107] 11.8 percent, almost 12 percent of women who had an intact D&X had a premature labor and delivery.

The women who had a D&E, 4.4 percent had a premature labor and delivery. That is almost a three-to-one increase. It is clearly a trend. It would certainly get my interest and I would be concerned. And, again, if anything, it would tend to say D&X is more risky for the mother and more likely to cause premature labor, which is one the most serious complications in obstetrical situations.

Q. Doctor—

A. It is not statistically significant, but it is certainly a trend that we should look at. And, again, further studies should be carried out, because if this trend is true that would be strong evidence that intact D&X is not as safe for the mother.

Q. Doctor, is it your understanding that the Chasen article has not yet been published?

A. To my knowledge it has not been.

Q. Does that status affect at all your views to the strength of the study?

A. The reason we like to actually review published studies is then they are out in the general medical community. In a study like this it would definitely be discussed at journal clubs. You get more input and feeling

of the medical community on the significance of this. And sometimes controversial articles * * *.

* * * * *

[1109] fetus.

And then, the mother went to additional chemotherapy and additional things were done.

Q. So you have never encountered a situation where the pregnancy had to be terminated before viability because of a maternal health condition?

A. I have not.

Q. You may have said this already, Doctor. How many live babies have you delivered?

A. Well over 3,000.

Q. Doctor, have you ever considered whether a particular pregnancy should be terminated because of a fetal anomaly?

A. There I have had patients that I do genetic amniocentesis. I do get the information back at 18, 19 weeks. I have had patients who, because of the information that was received, have decided to terminate the pregnancy.

And they are referred to my maternal fetal medicine physicians. And those are carried out.

Q. Doctor, are there maternal health conditions for which a termination of pregnancy would be indicated to save the life of the mother?

A. There are. There are fortunately very few and far between, and very remote. Most of the time as both it says in my article and in my quotes from Stubble-

field's chapter, that there are very few indications if you are in the time frame at * * *.

* * * * *

[1111]

MS. GARTNER: —This is hearsay for him to be testifying about what other physicians said in their declarations or depositions.

THE COURT: Sustained.

BY MR. SIMPSON:

Q. Doctor, in your practice have you seen a need for the use of the intact D&X method?

A. I have never seen a situation where an intact D&X method was necessary to be performed.

Q. We mentioned earlier conditions where pregnancy termination may be indicated to save the life of the mother. Are there also maternal health conditions for which termination of pregnancy would be indicated to preserve the health of the mother?

A. That is possible.

Q. Doctor, does your practice involve high risk obstetrics at all?

A. My practice does involve high risk practice.

Q. What is high risk obstetrics?

A. Depending—and there are various definitions, but the severity of the patient, diabetes in pregnancies, some heart conditions.

I have a patient now that has a biliary—it is the tract from the liver—and has significant potential risk. But she has been a patient of mine. This is a not usual [1112] condition. I had her see a maternal fetal

medicine physician in consultation, but she returns to me for care.

When we started, the subspecialty of maternal fetal medicine did not even exist. So initially we were the treating maternal fetal medicine physicians de facto.

Q. Doctor, how many physicians are there in your practice group?

A. There are, in my wider group, 28 obstetricians and gynecologists.

Q. Have you heard of any circumstances in your practice group that call for the use of intact D&X?

A. I have not.

Q. Doctor, are there emergency situations in which a fetus or infant must be removed as quickly as possible to save the mother's life or health?

A. There could be acute hemorrhage, those kinds of things, that you would need to resolve that issue.

Q. Could the intact D&X method be used for those situations?

A. It could be used, but it would never be the only choice and never be the best choice.

Q. Based on your understanding of the length of time that it takes to prepare for an intact D&X, could it be used in an emergency situation?

A. It could not be used in an emergency situation because, as I said it, takes three days to do that procedure.

* * * * *

[1121]

A. It does.

Q. I'd like to read a few sentences from your JAMA article.

That's Exhibit A-55. If you can just turn to that to make sure I am reading it correctly.

I will read from the second page left hand column, the last paragraph in that column.

> "Beyond the argument of potential viability, many pro-choice organizations and individuals assert that a woman should maintain control over that which is part of her own body (i.e., the autonomy argument). In this context, the physical position of the fetus with respect to the mother's body becomes relevant. However, once the fetus is outside the woman's body, the autonomy argument is invalid. The intact D&X procedure involves literally delivering the fetus so that only the head remains in the cervix. At this juncture, the fetus is merely inches from being delivered and obtaining full legal rights of personhood under the U.S. Constitution?"

Are those your words, doctor?

A. Correct.

Q. Is that your testimony today?

A. Correct.

* * * * *

[M. LEROY SPRANG, M.D.—CROSS EXAMINATION]

* * * * *

[1122]

Q. And, in fact, you feel so strongly about the preferability of induction to D&E after 20 weeks that if you have a patient that has a fetal death in utero after 20 weeks you probably wouldn't even bring D&E up because you think there is, in your belief, induction is the safer process for the patient at 20 weeks or greater; isn't that right?

[1123]

A. Correct.

Q. And if a discussion of D&E versus induction did come up, you would encourage your patient to have an induction because you think it's safer?

A Correct.

Q. Okay.

And you believe that in terms of deciding which procedure to choose, the only prudent thing for an intelligent woman who trusts her doctor to do is to strongly rely on what her doctor is saying because patients don't have enough of the background to understand the nuances of the recommendation.

Is that right?

A. Correct.

* * * * *

[1133]

* * * * *

Q. Let me read this to you. The report of the Task Force states at the bottom of page 196:

> "To minimize uterine or cervical perforation either from instruments used during the D&E or through piercing by fetal parts, some physicians use a form of D&E that has been referred to in the popular press as intact dilation and extraction, (D&X)."

I am going to skip the next sentence which sets forth ACOG's definition of that procedure, and I will continue to read at the bottom of the page.

> "This procedure may minimize trauma to the woman's uterus, cervix, and other vital organs. Intact D&X may be preferred by some physicians, [1134] Particularly when the fetus has been diagnosed with hydrocephaly or other anomalies incompatible with life outside the womb."

Did I read that correctly, Dr. Sprang?

A. Yes.

Q. And this was what the AMA Task Force Report stated; is that correct?

A. Correct.

Q. And then while we are on this page 197, Dr. Sprang, why don't we look at the paragraph, I think it is two paragraphs down that begins with the word "Hysterotomy and hysterectomy."

Do you so that?

A. Yes.

Q. Let me just read to you the first sentence of that paragraph and you can tell me if this was what the AMA Task Force wrote. Now I am reading:

> "Hysterotomy and hysterectomy have been used to terminate pregnancy but are not used routinely as a form of abortion because maternal mortality and morbidity associated with these procedures are significantly greater than those associated with other procedures used to induce abortion."

And is that—did I read that correctly Dr. Sprang?

A. Correct.

[1135]

Q. That is what the AMA Task Force wrote, correct?

A. Correct.

Q. And does that reflect the consensus view of the AMA Task Force?

A. Correct.

* * * * *

[1147]

* * * * *

Q. Dr. Sprang, I am going to ask you, again, I'm going to test your eyesight and ask you to look back at the AMA report, and look specifically at page 199. The third, I think it's the third paragraph on that page begins with the word "cervical incompetence."

Dr. Sprang, can we do it again? I will read it to you and tell me if I've read it correctly?

A. Sure.

Q. The report, and this is, again, from the AMA Task Force Report:

> "Cervical incompetence and compromised subsequent pregnancies are important, but unresolved concerns related to abortions performed in the second or third-trimester. Unfortunately, there is little research on whether these complications are more likely to result from D&E (or intact D&X) or from labor induction techniques."

[1148]

And that's what the AMA task force wrote on this subject; is that correct?

A. Correct.

Q. Does this reflect the consensus view of the AMA task force?

A. It is unresolved, in fact, it is unresolved and I agree with it.

* * * * *

[1162]

* * * * *

The AMA Task Force on which you served gave thorough consideration to ethical issues related to both intact D&E and other late abortion procedures; is that correct?

A. Correct.

Q. Okay. And I would like you to take a look at page 208 of that report.

Do you want to take a look at the last paragraph on that page, Dr. Sprang.

A. Do you want me to read it?

Q. Well, no. I am just going to ask you a question. And if we need to, we will read it. But let me ask you: it is true, is it not, that the report states that the ethical arguments about intact D&E do not lead to one clearly preferred ethical position?

A. The way the report is written it left it open.

Q. Right. So—and the committee writing the report did not reach consensus about the ethics of intact D&E; is that right?

A. Correct.

* * * * *

[1163]

A. This was a board of trustees report. It went back to the board of trustees for their final approval.

Q. Okay. But my question for you is whether the task force that you were on that wrote this report, you did not reach consensus about the ethics of intact D&E, did you?

A. Correct.

Q. Now, I think in your deposition, Dr. Sprang, you testified that you have two ethical concerns with intact D&E. I think you said that the first one is that you believe it is unethical to cause fetal demise once any part of the fetus is outside of the uterus; is that right?

A. Is that an actual quote? I would not have said "any part of the fetus." I would have said I believe it is unethical to kill the fetus outside of the mother, when the fetus is outside of the mother. So the wording is relevant.

Q. So your testimony is you think the ethical concern comes about when the demise occurs when any part of the fetus is outside the body of the mother?

A. You keep adding "any part of the fetus."

Q. I'm sorry.

A. And I said: "When the fetus is outside of the mother."

Q. Okay. So, you mean, that the ethical concern is when the entire fetus is outside of the body of the mother?

A. Sufficient to mount that it is in the process of delivery where it becomes a question of: is it or is it not delivered?

* * * * *

[1167]

* * * * *

Q. And would you agree that at an institution of the caliber of Northwestern it is unlikely that unsafe medical procedures are being taught?

A. Subject to obviously interpretation of what is safe and what isn't safe, most of the information we have seen and certainly the most recent article would say they are similar, D&E and D&X were similar in their complication rate. But there might be a trend for the D&X to have more complications. But it is certainly not an established fact.

Q. So you would agree that D&E and intact D&E are comparably safe?

A. I am not sure I would go that far. I would say there is not absolute proof that D&X is less safe.

* * * * *

Supreme Court, U.S.
FILED
AUG 3 - 2006
OFFICE OF THE CLERK

No. 05-1382

# In the Supreme Court of the United States

ALBERTO R. GONZALES, ATTORNEY GENERAL,
PETITIONER

*v.*

PLANNED PARENTHOOD FEDERATION OF AMERICA,
INC., ET AL.

*ON WRIT OF CERTIORARI*
*TO THE UNITED STATES COURT OF APPEALS*
*FOR THE NINTH CIRCUIT*

## JOINT APPENDIX
## (VOLUME 4)

EVE C. GARTNER
*Planned Parenthood*
*Federation of America, Inc.*
*434 West 33rd Street*
*New York, NY 10001*
*(212) 541-7800*

*Counsel of Record*
*for Respondents*
*Planned Parenthood*
*Federation of America, Inc.,*
*and Planned Parenthood*
*Golden Gate*

KATHLEEN S. MORRIS
*Office of the City Attorney*
*Fox Plaza, 6th Floor*
*1390 Market Street*
*San Francisco, CA 94102-5408*
*(415) 554-3987*

*Counsel of Record*
*for Respondent*
*City and County of*
*San Francisco*

PAUL D. CLEMENT
*Solicitor General*
*Department of Justice*
*Washington, D.C. 20530-0001*
*(202) 514-2217*

*Counsel of Record*
*for Petitioner*

**PETITION FOR A WRIT OF CERTIORARI FILED: MAY 1, 2006**
**CERTIORARI GRANTED: JUNE 19, 2006**

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UNITED STATES DISTRICT COURT
FOR THE NORTHERN DISTRICT OF CALIFORNIA

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No. C 03-4872 PJH

PLANNED PARENTHOOD FEDERATION OF AMERICA, INC. AND PLANNED PARENTHOOD GOLDEN GATE, PLAINTIFFS

*v.*

JOHN ASHCROFT, ATTORNEY GENERAL OF THE UNITED STATES, IN HIS OFFICIAL CAPACITY, DEFENDANT

---

**TRANSCRIPT OF PROCEEDINGS**
Monday, Apr. 12, 2004
Volume 8

---

BEFORE THE HONORABLE
PHYLLIS J. HAMILTON, JUDGE

---

APPEARANCES:

FOR PLAINTIFFS:

BINGHAM MCCUTCHEON LLP
Three Embarcadero Center
San Francisco, California 94111-4003

By: BETH H. PARKER, Attorney at Law
DEBORAH ADLER, Esquire

Planned Parenthood Federation of America
434 W. 33rd Street
New York, New York 10001

By: EVE C. GARTNER, Esquire

Planned Parenthood Federation of America
1780 Massachusetts Avenue, N.W.
Washington, D.C. 20036

By: HELENE T. KRASNOFF, Esquire

FOR INTERVENOR:

Office of the City Attorney
1390 Market Street, Suite 1008
San Francisco, California 94102

By: KATHLEEN SUZANNE MORRIS
ALEETA MARIE VAN RUNKLE
Deputy City Attorneys

FOR DEFENDANT:

U.S. Department of Justice
20 Massachusetts Avenue, N.W. Room 7128
Washington, D.C. 20530

By: MARK THOMAS QUINLIVAN,
W. SCOTT SIMPSON,
KAIJA MARIE CLARK,
Assistant U.S. Attorneys

* * * * *

[1188]

THE CLERK: Please take the stand. Please state your name for the court.

THE WITNESS: My name is Dr. Elizabeth Shadigian.

THE CLERK: Spell your last name.

THE WITNESS: S-H-A-D-I-G-I-A-N.

THE CLERK: Thank you.

[ELIZABETH SHADIGIAN, M.D.—DIRECT EXAMINATION]

BY MS. CLARK:

Q. Good morning, Dr. Shadigian.

A. Good morning.

Q. Could you please tell the court what you do for a living?

A. Yes. I'm a faculty member at the University of Michigan in the school of medicine, and I'm a physician, an obstetrician gynecologist that takes care of pregnant women and women who aren't pregnant for their gynecological needs.

Q. How long have you been at the University of Michigan?

A. I will be completing my 10th year at the University of Michigan in June of 2004.

MS. CLARK: May I approach, your honor?

THE COURT: Yes.

BY MS. CLARK:

Q. I've just shown you what has been marked as Defendant's Exhibit A-6. Is this a copy of your C.V.?

A. Yes, it is.

Q. Did you create it?

[1189]

A. Yes, I did.

Q. Does it accurately reflect your education, work experience and publications?

A. Yes, it does.

MS. CLARK: Defendant moves to admit into evidence Defendant's Exhibit A-6.

THE COURT: Any objection?

MS. PARKER: No.

MS. KRASNOFF: No objection.

THE COURT: Admitted.

THE CLERK: A-6 into evidence.

(Defendant's Exhibit A-6 was received in evidence.)

BY MS. CLARK:

Q. Dr. Shadigian, will you explain briefly your educational background?

A. Yes. I went to Purdue University for undergraduate education and received a bachelor of science degree in chemistry. And then, I went on to the Johns Hopkins School of Medicine and received my medical degree in 1990. And then, received postgraduate training at an obstetrics and gynecology residency program in Baltimore called Franklin Square Hospital Center, as well as the Johns Hopkins Hospital.

Q. Do you have any board certifications?

[1190]

A. Yes.

Q. What are those certifications?

A. I am boarded in obstetrics and gynecology.

Q. And are you licensed to practice medicine in Michigan?

A. Yes, I am.

Q. And was it immediately after your residency that you came to work at the University of Michigan?

A. Yes. I became a faculty member basically right after residency.

Q. What was your initial position?

A. I was clinical assistant professor of obstetrics and gynecology.

Q. And what is your position now?

A. I'm clinical associate professor of obstetrics and gynecology.

Q. Does that mean you have been promoted since you have been at the University of Michigan?

A. Yes, in 2002 I was promoted.

Q. Dr. Shadigian, could you please explain what you do as a clinical associate professor at the University of Michigan, first with respect to your clinical practice?

A. Yes. Basically, I do three things at the University of Michigan. One is actually take care of women in terms of my scope of practice in obstetrics and gynecology. So that is the clinical care piece. [1191]

I also teach medical students and residents, and I also do research in various subjects.

Q. Could you describe the kinds of patients that you treat?

A. Yes, I certainly can. I have a broad range of practice. I'm a generalist. I do high risk obstetrics, so I take care of women with different medical diseases in pregnancy such as high blood pressure, diabetes, certain connective tissues disorders or rheumatological disorders. I take care of twin pregnancies, and I take

care of normal low risk pregnancies, as well. I do prenatal care of these women, as well as their delivery and postpartum or aftercare after a pregnancy.

And, in addition, I do generalist gynecology, so I take care of patients with chronic pelvic pain. I operate on women who need certain surgical procedures. In addition, I do family planning, such as discuss with women if they want to avoid pregnancy what options they have. And also just do well women gynecological care.

Q. Approximately how many babies have you delivered in the last year?

A. Probably between 100 and 150.

Q. How many of those are vaginal deliveries?

A. Probably about eighty percent of them.

Q. And twenty percent by cesarean section?

A. Yes.

[1192]

Q. And have you ever vaginally delivered babies in a breech presentation?

A. Yes, I have.

Q. When was the last time you did that?

A. Probably about two months ago.

Q. Can you briefly describe a vaginal delivery when there is a breech presentation?

A. Yes. First we assess what part of the baby is coming down, so if it is actually the feet or the bottom or one foot or two feet and where the feet are with respect to the bottom.

And then, we go ahead and deliver the presenting part. So if it's the bottom, we will deliver that, and then we bring the feet out. We deliver up to about the navel and then we pull the baby gently down in a towel, and then we reach up and put our fingers down the humerus or upper arm and basically hook near the elbow the baby's arm and have it come out. And then, we rotate the baby and bring out the other arm. And then, once the head is delivered, once the—excuse me—the shoulders are delivered, then we would go ahead and proceed to deliver the baby's head. And basically we want to deflex or tip down the head to reduce the diameter of the baby's head coming out.

Q. Are most of the patients that you see, are most of them referrals to you?

A. Some are referrals but some are patients. I have been [1193] there for 10 years now, so I have a lot of women I have followed for many years.

Q. Do you ever refer patients to maternal fetal medicine specialists?

A. Yes, I do.

Q. What kind kinds of patients do you refer to MFM's?

A. There are some women with more severe medical problems, such as complicated cardiac disease, women who may have triplets or quads, and three or four babies inside.

In addition, there are certain connective tissue disorders like severe lupus, which I would refer because of their specialized training as well as women who are HIV positive.

Q. Dr. Shadigian, you mentioned that you provide family planning to your patients. What kind of family planning do you provide to them?

A. Basically I provide the full range of family planning, so anywhere from explaining how natural family planning works, offering them barrier contraceptives such as diaphragms and condoms, through births control pills, intrauterine devices and sterilization.

Q. Doctor, are there occasions when caring for a patient you have needed to terminate a pregnancy?

A. Yes, there have been.

Q. And in those instances have you ever needed to terminate a [1194] pregnancy where the fetus was alive? That the termination—excuse me—was necessary to treat a maternal health condition?

A. Yes, I have.

Q. What reasons have you needed to terminate a pregnancy?

A. There is a wide variety of reasons. One example might be an infection in the mother's uterus or around the baby called chorioamnionitis. There are other medical disorders like preeclampsia when there is high blood pressure and swelling in the woman as well as protein in the urine that may necessitate an earlier birth.

And then, there may be some other situations where a woman may have cancer and need to initiate chemotherapy and the baby is a far enough along to be delivered to help care for the mother.

Q. Dr. Shadigian, have you ever diagnosed fetal anomalies in the pregnant women that you have treated?

A. Yes.

Q. What kinds of fetal anomalies have you detected?

A. Again, a wide variety in the last 14 years. Some things are genetic like trisomy 21, or 18 or 13. Turner's syndrome is another example of a kind of genetic problem.

And then, there are actual structural problems, so things like having the bowels outside the baby, such as encephalocele or gastroschisis are other examples of anomalies. [1195]

In addition, I have taken care of a mother with conjoined twins, which is where instead of two babies are separated they were connected both at the chest wall and abdomen, as well.

Q. Through your training and background and your clinical experience, have you become familiar with different methods of terminating pregnancy?

A. Yes, I have.

Q. What methods have you utilized to terminate pregnancy?

A. The full range of methods are—or what I would use generally, some things are as common and simple as a cesarean section done earlier than usual. And other would be procedures such as D&C's, D&E's, which is dilation and evacuation and also medical induction of pregnancy. I should say of labor and pregnant.